

Article

The Arbitrariness of Faith-Based Medical Exemptions

Aaron Quinn

Department of Journalism & Public Relations, California State University Chico, Chico, CA 95929, USA; amquinn@csuchico.edu

Abstract: There are a variety of reasons for which one might claim an exemption from a public health mandate such as a required COVID-19 vaccine. Good-faith exemption requests—for medical, religious, or other reasons—are generally recognized as legitimate and granted to individuals when the imposition of the mandate on the requestor is perceived to outweigh the corresponding risk their lack of vaccination poses to the health and rights of others. This paper develops a method of analysis rooted in Western analytic philosophy designed to examine these issues and arrive at a framework for assessing the scientific, moral, and religious claims for exemptions from COVID-19 vaccinations. I argue that some empirical and moral beliefs are epistemically superior to others when they have a correspondence with agreed-upon facts about the world, are grounded in shared human experience, employ strong and substantive reasons for their claims, and embrace common convictions evidenced in the character of moral agents. Such facts must be demonstrable in the form of observably verifiable evidence and reliable testimony. Only then should a request for an exemption to an otherwise-required public health mandate (including a vaccine) be recognized. The alternative creates various difficulties, including the problem of moral arbitrariness.

Keywords: COVID-19; vaccine exemption; virtue theory; epistemology; empiricism; skepticism; religious faith; belief; vaccine mandates; moral decision-making

1. Introduction

This essay asks whether, in the context of making public health policy, claims for, and the granting of, religious exemptions for COVID-19 vaccinations meet *prima facie* ethical and epistemological standards for such requests insofar as such exemptions are recognized as “reasonable,” that is, justifiable, legitimate, compelling, and authoritative. To explore this issue, I employ two distinct though synergistic philosophical fields, namely (1) epistemology (the study of knowledge) and its grounding in an empiricist scientific methodology; and (2) normative ethics and its instantiation in virtue theory. I use this approach to analyze various claims for medical and religious exemptions to COVID-19 vaccines, particularly because medical and scientific reasoning, as well as analytic philosophical reasoning, are both committed to the scientific method of inquiry.

Many scholars exploring cultural or spiritual rationales for impactful and policy-forming beliefs advance or examine various versions of reason-giving and moral justification provided by various religious traditions. While members of a given religious community might be moved by the arguments advanced by their own tradition on the issues under consideration, there is no guarantee that they will find compelling the descriptive or normative claims of those in other—including various secular—traditions. I seek to provide a non-religiously grounded entry into this debate, and one that commends to religious and non-religious thinkers, alike, a set of presuppositions and starting points for critical reflection and policy development around the myriad of issues related to COVID-19 and public health. While secular and employing the analytic tools of philosophy, the empirical method I favor, which legitimates modern science and advances a theory of morality that links judgements of specific acts and practices to the consistent character of the individuals who advance such normative claims, should be seen itself as one voice in



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the conversation among diverse traditions. Unlike the parochial and partial perspectives of various religious voices, however, it has more to commend it, strategically and practically speaking. I hope to show how Western analytic epistemology and one version of a normative secular virtue ethic inform beliefs and justifications that can be morally compelling for secular thinkers, even for individuals from various global religious and cultural traditions. The ethico-epistemic methodology I embrace suggests that in order to make good moral decisions one needs to be properly informed regarding the facts tantamount to moral decision-making, particularly in complex cases in which moral intuitions are unable to provide adequate guidance in making such decisions. Additionally, it asserts that specific ways of reasoning from such facts, and what those facts imply about the sorts of humans we are, must be accounted for in our moral judgments, decisions, and even in the shaping of our public health policies.

This paper will evaluate and assess three sorts of claims for and against vaccine exemptions: (1) those advanced by people with medical claims to exemptions; (2) those advanced by people with religious claims to exemptions; and (3) claims advanced by a broader population of agents whose well-being might be compromised by the spread of COVID-19 through those who are granted vaccine exemptions for whatever reason. These foci serve as the basis for formulating and exploring three questions:

- (1) Can select medical diagnoses establish an ethico-epistemic standard upon which to support the request for COVID-19 vaccination exemptions in light of current public health standards and practices?
- (2) Can religious beliefs establish an ethico-epistemic standard upon which to grant COVID-19 vaccination exemptions in light of current public health standards and practices?
- (3) Can at-large members of society establish an ethico-epistemic standard that can successfully ground a normative claim that would require other members of the society to submit to appropriate COVID-19 vaccination mandates even against their will?

In what follows, I acknowledge that there are diverse forms of religious reasoning and that those who are religious, or who at least tend to find reasoning which proceeds from religious premises to be the most persuasive, might naturally object to what they see as a favoritism displayed on my part towards a non-sectarian methodology. While fully respecting the *de facto* nature of different means of arriving at “truth” in the process of policy-making, I nevertheless argue that a secular approach, while not totally free from making errors, represents our best chance of approximating accuracy, accommodating inevitably divergent perspectives in pluralistic, non-homogeneous settings like the ones reflected in our society, and, as such, is the one which is most commensurate with pursuing the ideal of objectivity.

2. Epistemology and the Basis for Believing

Epistemology—or the study of knowledge—is a branch of Western philosophy that, among other things, focuses on whether or how we can come to know facts about the world as a way to attain, in the words of Steup and Ram, “cognitive success” (Steup and Ram 2020). The term derives from the Greek word *episteme*, meaning “knowledge,” or “understanding.” One of the most common definitions of knowledge is a “justified, true belief,” (hereafter JTB) that is grounded in a tripartite analysis of knowledge (Gettier 1963; Ichikawa and Steup 2017), structured as follows:

S knows that *p* if and only if:

- *p* is true
- S believes that *p*
- S is justified in believing that *p*

Here is an example of how such justified belief arises. I can claim with high confidence that the statement “Sacramento is the current capital of California” is a justified true belief (JTB) of mine, because it is true; I believe it; and I am justified in believing it. I can argue the claim is true because of a decision made by state leaders long ago. I believe it is true

because of my experience of what it means for a city to be a capital. Additionally, I have only encountered assertions that Sacramento is the current capital of California and I have never encountered an assertion that claims a different current capital of California. All of these experiences provide me with an empirical basis for the establishment of my belief. No existing text or person has ever contradicted this experience. Finally, and because of the truth claim, the nature of the evidence, and the way I have come to believe that truth, I am justified in believing the status of Sacramento as California's capital.

While this logic seems basic enough, it is crucially relevant to any analysis of what circumstances there are, if any, which warrant exempting oneself from the law of the land when that law is meant to safeguard the well-being and health of a population. Can private beliefs which do not accommodate universalization ever be authoritatively cited as a means of legitimately not adhering to laws intended to apply to everyone for the sake of the good of everyone? I argue that the final conclusion of the tripartite—justified belief—can be a useful tool for validating many of our assertions in various practical contexts, including the key example from public health of vaccine exemption this essay considers. At the same time, the tripartite analysis of knowledge as the means of arriving at JTBs is not without challenges, problems, and limitations. To demonstrate challenges with the JTB tripartite theory let me raise two additional issues.

First, if I have established that an assertion is true and that I believe it, why should there be a need for a justification beyond that it's true? In other words, when it comes to what I will refer to as *simple claims of knowledge*, the fact that a statement is true itself should be enough justification for one's belief, because steps two and three of the tripartite are redundant. Thus, one could argue that simply establishing "true belief" is sufficient to justifying that belief, again, when this involves simple claims such as the one asserting Sacramento as California's capital. What happens, however, when the claims being advanced are what might be called "complex claims to knowledge"? A 1963 paper by Edmund Gettier titled "Is Justified True Belief Knowledge" offered cases in which justified true belief was derived from a false, but apparently justified, belief (Gettier 1963). Dreyfus (1997, p. 292) offered one such case when he described someone searching for water on a hot day. The water-seeker suddenly sees what she believes is water in the distance. In fact, what she observes is a mirage. However, when she follows the mirage, there just happens to be water there. For Gettier and Dreyfus, both, the case in question reveals that the JTB may establish the set of necessary though not sufficient conditions for knowledge. It is likely a necessary set of conditions, but what more is necessary still seems unsettled in the literature (Dreyfus 1997).

Let me offer another example of such a challenge from the early days of the COVID-19 pandemic in 2020. At that time, many independent physicians and public health officials proposed that shoppers wash or sterilize food, the bags in which the food was transported, and the surfaces that they might have touched before sanitization. What these officials generally knew was that many or most viruses are killed on contact with certain sterilizing agents. What they did not know was whether (armed with little evidence to support their assertions and policy recommendations) those sterilizing agents could be applied effectively to COVID-19 in the way they suggested. As more and better empirical evidence became available, such recommendations were eventually found to be excessively cautious or unproductively ineffective, not efficacious for slowing the spread of the virus. Were these individuals wrong in initially asserting their recommendations and policies regarding such precautions? Given the range of unknowns concerning the natural history of COVID-19, the virus's initial risk to some individuals and groups, and the lack of society's preparation in addressing the emerging pandemic, it seemed clear to many that the beliefs, concerns, cost-benefit analysis, and precautions that undergirded these early and provisional public health practices were initially justified. Similarly, recommendations for broad public masking, social distancing, isolating, and quarantining were also proposed in several contexts in response to the best construal of the data and out of a similar abundance of caution. In hindsight these appear to have been part of an overall life-saving strategy, even if not yet fully justified at the time they were implemented. Both recommendations were made

without complete empirical data or scientific certainty, and not all of them turned out to be fully accurate. Taken together, however, they were arguably justified in the context of an early-stage pandemic and in a manner consistent with the fundamental methodological principles of public health based on empirical evidence. Still, there was a public trust cost with regard to treating these health measures as beyond questioning (Frieden 2022).

A second limitation with claims of the necessity and sufficiency of JTB's tripartite structure and components surfaces when we note that most of our concerns in applied or practical epistemology and ethics are not simple, definitional truth claims like "Sacramento is the capital of California". The city's status was simply asserted and legally decreed once a set of procedural and material criteria were met and agreed to. As a result, it serves as a facile example to test the adequacy of the theory of JTB. Employing such an example to establish an epistemic theory fails to appreciate the complexity of how we come to justify more complex truth claims.

In contrast, a more interesting epistemic challenge arises from an assertion such as the statement: "Sacramento is the *right* city to be the capital of California." This formulation raises a range of practical questions that puts significant pressure on the sufficiency of the tripartite structure of arriving at JTB. In this formulation, there is room for debate, empirical error, divergent judgements, various readings of the facts, and even a recognition that miscalculations of several aspects of what hierarchy of needs might be best for a capital city are likely. One could assume an evolving debate about whether a particular placement of the capital is justified, with that decision ultimately based on how well informed decision-makers were in the past, and what anticipated or unanticipated new information might surface over time. What should a capital city be like? What aspects of those criteria are held by Sacramento and other competing cities? How might the construal of facts (and the way we apprehend such facts) inform our belief about the truth claims made on behalf of the city, and what would it mean to justify such a claim in ways that meet our provisional definition of JTB? Finally, how might cultural, political, and ethical considerations shape our evolving sense of what the "right" choice might be?

It appears as if the establishment of any JTB will have to factor in many, potentially opposing, value-laden moral considerations in some way. Even the basic example above raises a host of concerns about employing exclusively the tripartite establishment of JTB as the basis for all of our claims to legitimate judgement and action. Indeed, a straightforward example like this, complicated only a bit beyond its "facile" formulation, serves to exemplify how tricky it might be ever to arrive at "true, justified belief", and thus calls into question the prospect of agreeing upon rules to live by "universally". More will have to be established if we are to place special faith in regulatory health guidelines intended for a *population* of individuals.

3. Augmenting Epistemic Claims with Moral Commitment and Virtue Theory

These limitations noted, I maintain that JTB is nevertheless essential to our ability to publicly and coherently justify the choices that we make for ourselves, and in our capacity as moral agents who sometimes critique, interrogate, or uphold society's actions, choices, and mandates. Science and empiricism are non-negotiable bases of the claims of medicine and public health. Their epistemic assertions are essential for assessing the legitimacy of beliefs about COVID-19 and responses to it. At the same time, if a large part of our lives is composed of encounters with truth claims and counterclaims that cannot be demonstrated in unambiguous and straightforward ways that employ the tripartite structure of arriving at JTB, and if we cannot always establish a certain ground for our truth claims, then we must shift our task away from a narrow focus on establishing simple JTBs and augment such commitments with additional tools that can help us justify our beliefs in the absence of a fully demonstrable truth. This realization is nothing new. Many concerns of practical epistemology involve accounting for moral values and ethical commitments, and these debates must go forward regardless of whether we can attain the complete and coherent

knowledge of the truth that we need. What additional considerations and tools might assist us in this endeavor?

Making the right decision is hard, and public health decisions in times of crisis reveal how intractable that process can be. Justified beliefs and actions require recourse to logic, but also consideration of our shared values that we claim are essential to life in community. Given the complexity of many decisions made in the medical and public health professions, I want to argue for a need—beyond the knowledge generated by the JTP—of moral commitments as the practical foundation for the normative claims made in the fields of ethics and public health.

There are a range of approaches to morality that might be considered for this task. Most pervasive in the literature of medicine and public health is principlism, popularized in the work of Tom Beauchamp and Jim Childress ([Beauchamp and Childress 2019](#)). Principlism judges the moral rightness or wrongness of an action by whether or not that action can be justified using one of a number of discreet and well defined substantial moral principles that possess broad appeal across various cultures and traditions. In this approach to morality, the rightness or wrongness of an action is a function not of the character of the moral actor *per se*, but of whether or not the action under analysis can be justified in a compelling way in terms of a given moral principle. Beauchamp and Childress identify four critical principles: non-maleficence, respect for autonomy, beneficence, and justice (*ibid*).

In spite of its comprehensiveness, coherence, relative simplicity, compatibility with our moral experience and considered intuitions, and provisional compatibility with much of the moral teaching of various religious and secular communities, principlism is an inadequate method of ethics for the project we are developing. Its weakness is that it fails to explicitly account for the need of moral actors to instantiate in their own person the substance of morality. This is particularly true in the context of public health, where the credibility of spokespersons, policy developers, agencies, and governments are crucial in establishing the trust needed in a complex, sometimes ambiguous, and politically inflected context. Because of this, we must explore an approach to ethics that can account for the considered values that we hold as important, captured in the substance of critical moral principles, but one that also informs both our view of the importance of moral agents and allows a means legitimately to assess those agents as viable and trustworthy in dealing with the important health aspects of our individual and corporate lives. In other words, we need to explore the viability of a virtue theory of morality, one that centers moral decision-making on agents and inculcates in them the characters, dispositions, motivations, and commitments needed to act effectively and in a manner in which they can establish trust and lead to good action.

Aristotle's *Nicomachean Ethics* is a good place to begin this process of exploration because of Aristotle's concurrent commitments to establishing an empirically grounded, agent-centered, psychologically aware, critically astute, and politically and culturally sensitive appreciation of how morality functions in complex situations in life. These elements are precisely the attributes that are most important as we think about what regulations or guidelines could be universalized in response to COVID-19. Aristotle developed what has become known as the *ergon* argument, which states: "[e]very art and every inquiry, and similarly every action and pursuit, is thought to aim at some good; and for this reason the good has rightly been declared to be that at which all things aim . . . the end of the medical art is health, that of shipbuilding a vessel, that of strategy victory, that of economics wealth" ([Aristotle 2009](#), Book I, chap. 1). For something to become a rule that is meant to be binding on the individuals in a population, it has to demonstrably lead to the flourishing good of that population. Applied to our current situation, the research, production, and distribution of COVID-19 vaccines fits well in this mold of the "art" of medicine, which is to bring about good health. From the perspective of an Aristotelian construal of right action, the moral role of public health practitioners—consistent with the declared ends of public health—is to determine what steps regarding vaccine use will reduce harm and enhance individual and community health based on our knowledge and our justified beliefs ([Oakley and Cocking 2001](#)). Public health professionals, then, are called upon to embrace

the specific epistemic principles that will guide that moral function of harm reduction and health enhancement by integrating their reading of the facts of the situation, gathered data, and the best justification for their moral commitments.

Aristotle provides the rudimentary impetus for this move, and Aristotelian virtue theory, which hinges on the “*ergon*,” or *function* of any action in pursuance of the human good, has been widely assessed and elaborated in contemporary scholarship by philosophers as various and influential as Philippa Foot (1978), Gertrude Elizabeth Margaret Anscombe (1958), Bernard Williams (1985), Alisdair MacIntyre (1985), Michael Slote (1992), and Christine Swanton (2003), all of whom help to construct the bridge between our epistemic commitments to provisional JTB and the virtue theory of role-related morality. What constitutes flourishing, including healthful flourishing, is not an *arbitrary* construct, but rather a refined assessment of the particular animal a human being is and judgment about what that being requires to participate in the good. In Aristotelian virtue ethics, opt-outs are not easily tolerated when the individual who is opting out negatively impacts the pursuit of these humanly flourishing ends in others.

If we accept the power of the Aristotelian construction of morality in role-related virtue theory and embrace our earlier commitment to empirical scientific reasoning as the basis for establishing truth claims, the task before us is to determine how best to bring these two elements together in a functional model of research, public health, and policy. The insights of three contemporary epistemologists can be invoked to elucidate the point. In *Science as Social Knowledge*, Helen Longino argues that belief justifications ought to be made based on sound scientific reasoning, even in the absence of empirical certainty (Longino 1990). “[T]o say that a theory or hypothesis was accepted on the basis of objective methods does not guarantee that it is true, but it does—if anything does—justify us in asserting that it is true” (p. 268). C.A.J. Coady’s work in social epistemology grapples with the enduring dilemma that we have when faced with individuals or institutions that claim to be asserting the truth or suggesting that their pronouncements should serve as the basis for justified truth claims (Coady 1992). Coady provides various reasons for why one might or might not believe—or not be justified in believing—a person’s testimony. For Coady, the trustworthiness of a testifier is supported by several conditions, including one’s expertise in a given matter, whether that person has been historically reliable in truth-telling, and whether that person exhibits other traits that make someone epistemically reliable. Finally, in his insightful and synthetic *A Virtue Epistemology*, Ernest Sosa blends epistemic and normative principles to establish a functional and complex foundation for the justification of true belief (Sosa 2007). Sosa likens ethico-epistemic judgments to a skilled archer’s shooting in three distinct ways. First, there is the judgment of whether the arrow hits the target—its *accuracy*. Second, there is the question of whether the archer’s accurate shot makes use of his skill. This skill is what Sosa calls *adroitness*. Third, Sosa asks whether a successful shot from the archer resulted from his adroitness or mere luck. If it is skill that led to the accurate shot, this is called *aptness*.

According to all three of these thinkers, in lieu of deductive certainty, which real-world situations rarely, if ever, make available, we have a duty of intellectual honesty to tether justificatory warrants to the wealth of information that can be gleaned from past experience, often relayed through the meaningful testimony of established authorities. Experience matters a great deal in terms of establishing trust of authorities. Sosa’s three principles of accuracy, adroitness, and aptness, for example, are essential to establishing and providing a test for judgment of the beliefs that we form in response to our interactions with people, facts, and events in our daily lives. To claim a belief is justified in this model, any epistemic successes must arise by way of adroitness, yet the theory also accounts for practitioners who, despite their general skill (adroitness), don’t always hit the target. For example, a public health practitioner in early-stage COVID-19 might have recommended that people wear masks in public gatherings, even in airy outdoor areas with ample sunlight when gatherings were only brief. It’s reasonable that, with limited information and inadequate data, the practitioner did not possess perfect knowledge of the efficacy of the normative

claims on which recommendations of provisional public policy were based. The person, generally speaking, is apt to make accurate judgments, but in that instance, missed the mark for lack of accuracy. Nonetheless, given the complexity of the task before them, they performed reasonably well and acted in a manner justified by the competing claims of epistemic coherence and moral commitment to which they are committed.

According to the functional ethico-epistemic model elaborated by Longino, Coady, and Sosa, to lay a legitimate foundation for the attainment of knowledge one must commit to scientific reasoning consistent with the scientific method, which is presumably what constitutes *scientific objectivity*. This requires one to observe, form a negative hypothesis, venture a provisional prediction, engage in experimentation, and then analyze the results either to confirm the hypothesis or advance a new testable negative hypothesis. At the same time—because many sources of prospective knowledge related to pandemic concerns are public health professionals—it is essential that any proffered testimony be trustworthy. In this context, one is typically judged trustworthy based on a track record of adroitness, but, as discussed above, with some tolerance for error in respect to accuracy. Additionally, public health officials must be correct in their judgments, but in the absence of certainty they must be adequately qualified to have made an imperfect or even flawed policy decision, and to have shown sincerity throughout the process by acknowledging the admission of failure when failure occurs. These three attributes, taken together, offer a substantive moral and epistemic groundwork for analyzing public health decisions.

4. Applying the Ethico-Epistemic Framework to Public Health and COVID-19 Vaccine Policy

To attain an exceptional level of certainty in many practical areas of life, including public health, is rare. Certainty is relatively attainable with regard to the sorts of simple claims mentioned earlier in this paper (e.g., Sacramento's status as California's current capital), but such certainty quickly deteriorates in a world of greater complexity, continuous discovery, reformulated theories, and considerations of moral, political, cultural and psychological realities and differences. Many things once thought of as fact, even in science, are now known to be false or inscrutable. Deliberately bleeding patients to stimulate recovery from disease was once commonplace but has been abandoned because other medical practices proved superior after experimentation. On this model, and with a firm commitment to the epistemic assumptions that we have discussed, medical and public health errors and inferior methods can be overcome and continuously improved upon.

A great challenge to current public health policy development, messaging, and instantiation of recommendations in social practices is accounting for this nearly continuous process of aiming for aptness but dealing with imperfect and incomplete knowledge, while simultaneously honing the skills elaborated by Sosa. To err, and err publicly, opens one's reputation to public scrutiny, and makes one vulnerable to the assaults of those who are often least adroit at scrutinizing the reasons and justifications for those errors or oversights. Whether such scrutiny stems from simple antagonism, a lack of information, a polluted public arena and media environment populated by self-styled political and social influencers, or results from honest disagreements on how facts are read and moral values are instantiated, the loss of public trust and social stability undermines public well-being. As with most imperfect ventures, the most successful long-term antidote appears to be systemic efforts to learn the truth and compellingly communicate justifiable true beliefs using historically sincere and accurate messengers who are seen as credible because of their typical accuracy, adroitness and general aptness. Experience counts. There is, unfortunately, no easy means for overcoming reputational damage from errors, other than to continue to ground one's empirical claims more firmly in a rigorous scientific method and to analyze and adjust one's recommendations consistent with new knowledge and our evolving sense of our obligations to our community. Error, and the responsible manner of dealing with error when it inevitably comes to pass, in this respect, is not tantamount to the "anything

goes” policy of a post-truth society. Rather, such a process is the alternative to a policy of rampant and vulgar subjectivism.

In light of the foregoing discussion, how might we assess the claims made by various groups and individuals for a COVID-19 vaccine exemption? Anticipation of an efficacious vaccine was present in most of 2020, as various companies designed, put through trials, and rolled out vaccines to great fanfare in December 2021 with full deployment in early 2022. But the speed of their development, the use of new mRNA technologies, concerns about drug trials, and accompanying public health, political, and cultural turmoil complicated the process. In much of the world, the most pressing issue was how to obtain clinically tested vaccines for ravaged populations, and issues related to the logistics and financing of vaccine rollout and determination of vaccine priority were decisive considerations. In the United States those concerns occupied the public health infrastructures of all fifty states as well. However, in this context one of the most important issues that needed to be addressed was whether and on what basis to permit COVID-19 vaccine exemptions, given the assumed need for widespread vaccination to reduce the spread of the disease and unrelenting pressure on the public health system and economy.

A first case in which our epistemic and normative tools can be used in action is the situation in which the presence of specific allergies are advanced as medical justifications for a public health exemption from the COVID-19 vaccine. The Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) suspected rare allergies to at least two compounds in the four major COVID-19 vaccines. It appeared that polyethylene glycol (PEG) in the Pfizer and Moderna vaccines might provoke severe allergic reactions in a small portion of the population. A similar suspicion applied to polysorbate present in the Novavax and J&J vaccines (De Vrieze 2020). Individuals who had real or suspected adverse anaphylactic reactions to either of those compounds in actual vaccines or in other common products such as shampoo and toothpaste seemed *prima facie* to be likely candidates for a justified medical exemption. Still, a lack of certainty about the causal relationship between those compounds and anaphylaxis also prompted the CDC to recommend that those who had experienced a severe reaction to any vaccine or injectable medication consider avoiding the COVID-19 vaccines.

With respect to standards of evidence, an assertion of a JTB requires that these compounds have been shown to likely cause a severe allergic reaction in some potential vaccine recipients. There is evidence these two compounds are known to be allergic irritants to some people, and though few recipients have severe reactions, the reactions occur at a consistent frequency across the monitored US population. The US Department of Health and Human Services (HHS) database tracking adverse reactions (HHS 2022) was designed systemically to display how frequently these reactions occurred with a best hypothesis as to the cause. Although this was an imperfect diagnostic tool, it conformed to a systemic means of identification and determination of symptoms accompanied by a reasonable hypothesis as to the cause of allergic reactions.

The cited evidence offers a reasonably strong justification to allow medical exemptions based on CDC guidelines. It uses scientific objectivity insofar as data is available, and it is consistent with the application of Sosa’s three-pronged approach: It is accurate insofar as the allergies are systemic. It is adroit with respect to using skill (data) to avoid harming. And it is apt to the degree that it prevents unnecessary harm. At the same time, the CDC has been criticized for poor and infrequent communication regarding a number of factors, including confusing messaging about quarantine and return-to-work guidelines (Simmons-Duffin 2022). With the reputation of the CDC’s data-gathering function undermined by flawed messaging and poor communication, a waning credibility of its testimony, and in some high-profile instances unfortunate presentation of data, the successful fulfillment of its role and task eroded. Though the CDC employs some of the foremost global experts in immunology, sincerity—as judged by the public—is a matter of perception, and the perception of the CDC was quickly compromised because the public was not sufficiently familiar with any prior good reputation associated with the agency,

something exacerbated by the rapid onset of the COVID-19 pandemic. Given these factors in their totality, it is a reasonable conclusion that at the height of the pandemic the CDC offered the public at best a weak justification for believing its sincerity, if not its accuracy, when it came to recommendations for any action, including medical vaccine exemptions specifically. As mentioned by Coady (1992), much of what makes a person or organization appear sincere is a consistent, truthful message, but with very little prior experience with the CDC among most of the public, there was little to no history from which to develop trust-based judgments. Only time and improved messaging can repair this harm. All of this creates significant failure with respect to the justificatory value of testimony.

5. Epistemology and Religious Exemptions

If challenges surface with respect to justifying vaccine exemptions for health reasons, they are even more complicated for public health professionals and others when they are based on religious claims. One definition of religion derives from Latin and describes the act of venerating God or the gods (Smith 2009; Noss and Grangaard 2017). A more culturally inflected and expansive definition of religion comes from Grabenstein: “religions are fundamentally sets of beliefs about God or spirituality held by groups of people. Like all groups, religious groups develop their own systems of culture . . . [however] behaviors of like-minded individuals are not necessarily related to the theological basis of their religions. ‘Religious’ differs from ‘theological,’ in part, as social differs from scholarly” (Grabenstein 2013, p. 2012). These definitions of religion give rise to divergent justifications that individuals and groups put forward for their religious beliefs, the truth claims they assert, and the self-understandings and identities as religious adherents that they embrace.

Following scholars working in the field of the comparative study of religion, we can distinguish two common categories with respect to believers’ justifications for their belief. First, justification for belief can be seen in individuals and religious groups that affirm an axiomatic belief in God; the authority of specific religious scriptures, dogma, official teachings and interpretations of authoritative texts; and the theological doctrines and the pronouncements of religious leaders as either absolutely true or inspired in some way based on faith. Second, a recognized social construct that generates reasons for religious belief and justifications for related choices is what Neil Van Leeuwen argues is an *identity-constituting role* (Van Leeuwen 2014, 2018). In this expression of religious belief, the believer’s position among a like-minded community committed to specific values, roles, world-construal, and normative ways of being in the world is the basis for religious truth claims. Adherence to and recourse to religious doctrines as the basis for truth claims and motivation for normative choices are of secondary importance. Here, I examine these two modes of religious reasoning in greater detail.

5.1. Thomist and Kalam Cosmologist Arguments for Faith Belief

Two of the most common arguments developed in the Western theological literature for the reasonableness or truth of faith are inspired by Medieval Catholic theologian Thomas Aquinas and Contemporary philosopher Richard Swinburne, who developed Aquinas’s views. Neither Aquinas nor Swinburne claim to establish absolute certainty that they or anyone has knowledge of theistic truths that are derived from their assertions and the resulting embrace of faith. In what Swinburne calls the Thomist view, “The person of religious faith is the person who has the theoretical conviction that there is a God: a sincere belief that God exists and is the cause of the universe which then animates a range of subsidiary and reasonable conclusions that inform the religious perspective” (Swinburne 2005, p. 138). For Swinburne, the reasonableness of the belief is based on a probabilistic argument—if there is reason to think it is more probable than not that there is a God, then there is a justified belief in God.

Swinburne’s disciple William Craig articulates a standard version of the Kalam Cosmological Argument—Thomistic in nature—as such:

The classic Thomistic assertions (1–3)

- Everything that begins to exist has a cause.
- The universe began to exist.
- Therefore, the universe has a cause
- Craig adds additional conclusions that follow from Swinburne's insights (4–5)
- If the universe has a cause, then an uncaused, personal Creator of the universe exists who *sans* (*without*) the universe is beginningless, changeless, immaterial, timeless, spaceless, and enormously powerful.
- Therefore, an uncaused, personal Creator of the universe exists, who *sans* the universe is beginningless, changeless, immaterial, timeless, spaceless and enormously powerful (Craig 1997).

Numerous analytic philosophers and logicians have pointed out the misconceptions, erroneous presumptions, and inconsistencies under which cosmological arguments for the existence of God labor. A focus simply on the first premise, which need not be embraced as true in the absence of any supporting empirical evidence, illustrates the challenges. As philosopher Graham Oppy, observes:

One Kalām cosmological argument relies on the premise that it is impossible for there to be physically instantiated infinities (e.g., infinite temporal sequences, hotels with infinitely many rooms, Thomson lamps, etc.). Professor Craig claims that, even though such things are narrowly logically possible—as is shown by the (apparent) consistency of Cantorian set theory—nonetheless, they are not broadly logically (or metaphysically) possible. On the other hand, I see no reason to say that it is broadly logically impossible for there to be physically instantiated infinities. That is, I am not prepared to rule out the suggestion that it is broadly logically possible for there to be physically instantiated infinities. And that is enough to allow me to reasonably refuse to be moved by this Kalām cosmological argument. (Oppy 1995, p. 17)

In Oppy's view, the cosmological proposition presents two problems: First, there is no reason to believe it is true; but, second, if it were true, it seemingly embraces the reality of an infinite regression of causation, undercutting the claims of a first cause. The failure of the first premise renders the full argument suspect.

Aquinas lived in the 13th Century and, though deeply indebted to Aristotle, had no experience of the changing insights and perspectives of the 17th century scientific revolution that would grip the West. Independent of this fact, his conception of the divine is construed as a strictly mental, revelatory, or imaginative construction, inviting confusion about who or what is in control of God's existence (and by extension God's relevance to issues of religious belief and practice). Aquinas' argument about faith as a "justified reasonable belief", much like the Kalam argument that attempts to probabilize the existence of God, does not assert that the divine should be assumed as a fact about the world. Instead, Aquinas argues that faith is "the theoretical conviction that God exists and is "midway between knowledge and opinion" (*Summa Theologiae* 2a2ae 1, 2) (Aquinas 2006, p. 11). Aquinas further describes faith as "assent" which is understood as a mental state or inner will that if not blocked allows God to reveal the truths behind faith and of God (*Summa Theologiae*, 2a2ae, 2, 1 (Aquinas 2006, pp. 59–65)). Based on this argument, the truth about the existence and nature of God is dependent upon a person's willingness to believe, but it does not appear to establish a strictly logical foundation for that belief. It is a "believe and you will see" rather than a "see and you will believe" proposition.

The Kalam cosmological formulation and Aquinas' assessment of the power but limited nature of what it is able to claim presents a clear challenge for believers who are dependent on this belief to support their theism and derivative religious worldview. A more practical and concrete problem inevitably emerges from this situation. Individuals who assume the role of witness to, or asserter of, the truth claims of belief in God fail in nearly all important ways to meet the ethico-epistemic tests of accuracy, adroitness, and aptness introduced earlier by Sosa. Though individuals who speak as the voices of

this tradition might be sincere in their expressed beliefs, their assertions fail the tests of accuracy as established by empiricists' claims of miracles like raising individuals from the dead, bearing witness to visitations by celestial beings, assertions of divinity to human beings, and so forth. All such claims suggest a failure of the standard of "reliable testimony" that serves as a functional tool of everyday human life. The empiricist criticism against believers in God and in the religious worldview that is generated by this belief is not so much that such believers are inept or weak in their execution of accuracy, adroitness, or aptness. It is rather that by embracing their faith and beliefs, these terms cease to have any meaning in even referring to their endeavor. They are, in a real sense, functioning outside of a reality where such terms can even be used meaningfully. Abandoned, in this logic, is Aristotle's argument based on *ergon*, supplanted by subjectivist claims of the improbable that lack what could constitute verifiable or falsifiable, evidence. While the scientific method welcomes the possibility of uncertainty, and even error, faith-based claims on the part of those who "bear witness" do not so easily do so.

5.2. Identity-Constituting Religious Adherents and Derived Affirmations of Faith

A second sort of religious justification proffered by ones who want to step outside of ethico-epistemic standards in pluralistic settings is more cultural than theological. Van Leeuwen distinguishes "epistemic confidence" from "identity centrality" (Van Leeuwen 2022, p. 2). *Epistemic confidence* refers to "[T]he degree to which someone feels a belief state approximates knowledge," while *identity centrality* refers to "[T]he degree to which someone experiences a belief state as part of their social identity" (ibid). Social identity is defined as a "cluster of psychological states and behavioral dispositions that constitute someone as a member of an actual or potential in-group, or that an individual uses to achieve a desired social position" (ibid). This view correlates with Grabenstein's aforementioned reference to religious culture, which signals the potential for variation in the expression of religious belief. Van Leeuwen posits that the majority of those who identify as religious understand this association in terms of the "identity-centrality" category. This observation is supported by documented incongruities between the professed theological or doctrinal religious beliefs and actual behavior in a given religious group. For example, recent empirical social science research has revealed that followers from well-known religions are more likely to act according to religious tenets when such behavior is cued by a like-minded community's expressions rather than by deeply held personal religious convictions. One concrete example that illustrates this is the "Sunday Effect": Christians are more likely to engage in altruistic behavior on Sundays than other days (Malhotra 2010).

How does recent research on vaccine acceptance or vaccine hesitancy or refusal among these sorts of individuals and communities support or undercut the theoretical claims regarding the identity-constituting paradigm advanced by Van Leeuwen? For example, if a particular religion's doctrine—or even culture—eschews vaccination, is it also the case that a member who might wish to vaccinate defer vaccination for fear of ostracism or some other social penalty? With some notable exceptions, few religious groups in the United States prohibit COVID-19 vaccination among their adherents as a matter of policy. However, research conducted among religious communities that do not explicitly reject vaccines for their members has revealed individual members of these communities who are vaccine hesitant and who may individually attribute a posture of vaccine rejection to specific theological or doctrinal beliefs of their community. Grabenstein notices that "[i]n multiple cases, ostensibly religious reasons to decline immunization actually reflected concerns about vaccine safety or personal beliefs among a social network of people organized around a faith community, rather than theologically based objections per se" (Grabenstein 2013, p. 2011). In such situations, "identity-centrality" drives behaviors that may not even correspond to beliefs about a specific matter (e.g., whether to vaccinate). Instead, larger commitment to faith belief and its social penalties inform these choices.

It is possible to appreciate this complicated mechanism better if we examine the context in the US in which it is seen most consistently to play out and which has been the subject of

significant research over the course of the pandemic. A preponderance of White evangelical Christians in the United States has been resistant to COVID-19 vaccination. Recent studies suggest a premium on in-group values like purity and liberty, which reinforce vaccine hesitancy (Amin et al. 2017). A number of pastors and religious organizations such as Shane Vaughan—a Pentecostal minister in Mississippi—have created networks to spread form letters that they hope will be effective in securing vaccine exemptions (Hals 2021). The form letter aims to convince employment attorneys that the requesting employee embraces a “sincerely held” religious belief—a legal bar for exemptions at the federal level. Vaughn claimed in late 2021 that his form letter had been downloaded from his website more than 40,000 times. Clearly, the in-group pressure to establish recognized justifications for religious exemptions has fueled a grassroots movement that can undermine vaccination mandates and risk the health of the broader public by doing so.

However, a study that spanned fall 2020 and spring 2021 showed that a certain type of public health messaging was more effective than others in persuading evangelicals to vaccinate (Bokemper et al. 2021). It concluded that White evangelicals were most likely to vaccinate if they were presented with a public health message that highlighted community interest and emphasized reciprocity in addition to including a shaming component in cases where one chose to eschew vaccination. This mixture of a pro-social message with the expectation of reciprocity and a nudge to avoid the shame that would come if one were to infect a fellow group member led to a thirty percent increase in participants’ intent to vaccinate over the placebo, including a thirty-eight percent increase in negative evaluations of a non-vaccinators (ibid). These findings seem supportive, in many ways, of the characteristics and thinking that one would be likely to find in identity-constituting belief systems. And though the outcome of the pro-social study may be considered a success (i.e., increased vaccination acceptance among members of a reticent group), it also points to the vulnerability of group pressures that can be equally effective in promoting anti-social behaviors.

It is clear that some evangelical Americans who are opposed to vaccination are under pressure to form or retain beliefs that originate in their group identity. Though they might have been moved to some degree to vaccinate for the sake of helping others in their group, they tend to be receptive to reasons appealing only to their in-group. Empirical data reveals their response to public health messaging about non-vaccinators threaten their identity. To the extent it informs their choices, it does so against, not in favor of, the interests of population health (Chu et al. 2021). In other words, their reasons are not only not universalizable, but epistemically outside of the kind of “refinement of knowledge” in response to revealed errors which we determined earlier was reflective of an intellectually virtuous approach to supporting justified belief. So, whether one is a religious absolutist with respect to belief in the divine, scripture, or doctrine, or an individual whose religious identity is constituted by belonging to a religious group, the potential to put others at risk does great harm to the majority outside their group. In any case, no proffered objective or inclusive reasons will be put forward to motivate such religious insiders to vaccinate.

6. Conclusions

I have argued that knowledge and justified beliefs as established in this paper’s ethico-epistemic argument give significant and necessary consideration to both empirically-verified facts about the world as well as to moral judgments regarding decisions about what constitutes a just policy for vaccination exemptions. I have also argued that some specific medical exemptions—and the general approach to justifying medical exemptions—are morally justified because they have at least *prima facie* evidence-based reasons and competent voices behind them. Though this does not guarantee the prevention of human and methodological error—nor its reputational fallout—it does offer the best-available means of assessing a fair way of determining vaccine exemptions. At the same time, I have argued that two forms of belief justification typical of religious reasoning, namely, belief in the divine and canonical based beliefs as well as identity-constituting beliefs, fall short with respect to empirical and

justifiable evidence offered in support of their claims and therefore fail the test of attaining acceptable justifications for belief.

On first blush, there appears to be greater promise for vaccination acceptance in the identity-forming groups for at least two reasons. First, within such groups, there are people who appear to personally desire vaccination, but hesitate because of fear of social fallout. In such cases, their lesser reasons (desire to avoid negative group pressure) arguably override their better reasons (judgements about the efficacy of vaccination). Among such individuals, it might only take a nudge to change their avoidance posture to one of acceptance, although what that nudge must be is as of yet unclear. Second, there are instances in which religious believers who are prominent and do vaccinate have a motivational effect on vaccine hesitant religious adherents, as illustrated by the persuasive power that US National Institute for Health Director Francis Collins—a well-regarded evangelical Christian—has had on these debates in various evangelical churches (Chu et al. 2021; Bokemper et al. 2021).

Though it might be tempting to allow public health policy to accommodate the arguments of various contrarian religious thinkers and individuals by incorporating their choices into policy, this strategy ultimately does a disservice to the larger society. Some—probably most—humans embrace religious beliefs at some level. Some will refuse vaccines for the reasons explored in this paper. But it is not the obligation of the secular society, the scientific community, and the public health agents to whom we have entrusted our public health to embrace unjustified, unverified, even harmful consequences of beliefs without significant empirical and reasonable evidence to the contrary. To do so invites an arbitrariness and a posture that in the end is arguably unethical in its failure to advance the interests of others.

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