2022

An Agent-Centered Approach to COVID-19 Vaccinations

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A Thesis Presented By

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Submitted to the Keck Science Department
Of Claremont McKenna, Pitzer, and Scripps Colleges
In partial fulfillment of
The degree of Bachelor of Arts

Senior Thesis in Biology
December 8, 2021

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Section 1: Introduction

The rise of COVID-19 has dramatically affected the global economy, healthcare systems, and individuals' daily lives. One of the most controversial attempts to ameliorate the effects of the virus in the United States has been the distribution of COVID-19 vaccinations. In what follows, I will propose a novel agent-centered approach to motivating COVID-19 vaccinations. I begin in section one by exploring the origins and evolution of the virus in order to contextualize the debate surrounding vaccinations. Then, in section two, I introduce different response strategies concerning COVID-19 vaccinations, and address the ethical limitations of vaccine mandating. In section three, I provide an argument for a libertarian paternalistic, or nudging based, approach to COVID-19 vaccination policy that maintains individual agency while encouraging vaccination.

COVID-19 is estimated to have originated in November of 2019. It belongs to the Coronoviridae viral family, and originally got its name from the characteristic crown-like protein spikes on the outer surface of the virus, as the word "corona" is Latin for "crown" (Steinmetz 2020). The virus has been phylogenetically traced to origins in animal specimens, likely bats, which – in turn – was transmitted to other animals, and then humans at the Huanan wet market in Wuhan City, China (Sheeren 2020). The preliminary outbreak of COVID-19 in China infected over seventy thousand individuals and killed more than eighteen hundred within the first fifty days of the epidemic.

Though the first known cases occurred November 17 of 2019, Chinese officials did not alert the World Health Organization to the risks until over a month later on December 31, and did so by issuing a statement of reassurance that the disease was both "preventable and controllable" (Wu 2020). The International Committee on Taxonomy of Viruses named the virus as SARS-CoV-2, and in a February 11 World Health Organization Situation Report the World Health Organization first named the disease COVID-19. The rapid infection rate of COVID-19 is due in part to the method by which it is spread. The virus follows an airborne route of transmission, and it is spread through respiratory droplets and aerosol particles (Schuchat 2020). The viral agent can remain infectious when suspended in air over long distances and time, especially in indoor settings with poor ventilation. Thus, it can be spread through coughing, sneezing, and talking, but also simply through touching surfaces that the virus has landed on and then touching one's eyes or mouth.

Since its identification in late 2019, the virus quickly spread globally. The rate of spread paired with the high mortality rate and severity of COVID-19 makes this virus markedly different from other pandemics. Comparatively, the 2009-2010 Swine Flu pandemic was relatively mild as it did not necessitate the hospitalization of most infected people. Similarly rapid-spreading and fatal diseases such as smallpox have been eradicated globally through vaccination policies (Pitlik 2020). COVID-19 was observed to spread at different rates to other countries depending on various factors, such as connectivity and proximity to the origin country. By April of 2020, the disease had been identified in over 180 countries (Vara 2020). The spread of the virus varied in different countries due to cultural differences such as political and behavioral response, average household size,

and population density. The first recorded case outside China was identified in Thailand on January 13, 2020. Italy identified its first case on January 31, 2020, and soon overtook China as the country with the most recorded COVID-19 related deaths by March of 2020. January 21, 2020 saw the first recorded case in the United States, with a Washington State resident testing positive following their return from Wuhan on January 15 (Centers for Disease Control and Prevention 2020). The rate of infection through a country's population was dependent on government preparedness and early initiatives taken to minimize the spread. For example, while Japan identified its first case of COVID-19 three weeks after the reported outbreak in China, its rate of spread was markedly lower than other surrounding Asian countries. This early success was attributed to social distancing measures taken by the government, such as closing schools by April 2020, and initiating targeted testing clusters (Brahma 2020). However, while early measures were taken by many countries, COVID-19 quickly affected much of the global population, and created significant impacts on the political, economic, and healthcare fields.

In order to mitigate the spread of COVID-19, numerous initiatives have been taken in the United States. During March 2020, national, state, and local public health responses intensified and adapted, with measures taken to reduce high-density gatherings, augmenting case detection, and contact tracing. Travel restrictions for non-US citizens or permanent residents arriving from China were implemented in February of 2020, and warnings were issued to avoid nonessential international travel. Over the course of March, 2020, all 50 US states closed in-person instruction to reduce spreading the virus through population-dense classrooms. The wearing of face masks to reduce

transmission of COVID-19 through airborne particles was first recommended by the Center for Disease Control (CDC) on April 13, 2020, and some states such as California, New York, and Connecticut implemented mask mandates requiring the use of a mask whenever outside one's personal residence. While each of the mitigation efforts taken by the United States were received with varying degrees of support, the introduction of COVID-19 vaccinations was, by far, one of the most controversial.

The first COVID-19 vaccine administered in the United States was given to Sandra Lindsay, a critical-care nurse at Northwell Health in Queens, New York on December 14, 2020 (Loftus 2020). Lindsay received the newly authorized mRNA vaccine developed by Pfizer, Inc and BioNTech SE. Vaccines contain weakened live viruses that allow a healthy immune system to develop adaptive immune responses toward the target pathogen (Iwasaki 2020). The Pzifer-BioNtech vaccine contains the code of a specific viral antigen based on the outer spike protein used to initiate cellular infection. The mRNA in the vaccine transfers the information for this antigen code to T-cells in the immune system, which allows the production of neutralizing antibodies if and when the body encounters the SARS-CoV-2 virus (BioNTech). Numerous other vaccines have been developed by other companies including Moderna Therapeutics and Johnson & Johnson. The Pfizer-BioNTech vaccine received official FDA approval on August 23, 2021, with the Moderna vaccine receiving approval shortly thereafter on August 26, 2021. The Johnson & Johnson vaccine has yet to be approved by the FDA.

The importance of vaccinating citizens against COVID-19 reaches beyond the immediate benefits to one's own personal health and safety. The vaccine has been touted as an

essential element needed to reach what is known as 'herd immunity'. Herd immunity is the indirect protection from a virus or infectious agent that occurs when population immunity is reached either through vaccination or developed through previous infection (WHO 2020). Developing herd immunity is essential for the health and safety of a population as it allows for the protection of vulnerable populations. Building this immunity through vaccinations is especially important, as certain vulnerable populations – such as the immunocompromised – may not be able to take the vaccine themselves, as the weakened live viruses vaccines contain are too dangerous for damaged immune systems. Furthermore, if the proportion of immune individuals is below the herd immunity threshold, an infectious disease will continue to spread. Thus, if healthy individuals become vaccinated, the immunocompromised will indirectly benefit from the mitigated virus spread rate. Though numerous studies conducted by the CDC and other external researchers have found that COVID-19 vaccinations are extremely effective, with about a 90% success rate in preventing virus-related hospitalizations, there is still much controversy surrounding vaccinations.

A growing demographic in the United States vehemently contests the encouragement of the Biden administration and public health officials to get vaccinated against COVID-19. This demographic, will be referred to in this paper as "vaccine-hesitant" individuals. This term is broad in order to encompass the diverse standpoints individuals who oppose the vaccine take, much of which varies based on context, time, place, and vaccines (Butler 2015). One demographic of vaccine hesitant individuals is known colloquially as "anti-vaxxers". These "Anti-vaxxers" oppose all or nearly all vaccinations and laws that mandate vaccination. This demographic has been prevalent in the past,

namely in the form of parents who do not wish to vaccinate their children against diseases such as measles or influenza. The COVID-19 pandemic, however, has seen the addition of 'vaccine-hesitant' Americans. These individuals, while not definitionally anti-vaxxers, show hesitancy to accept COVID-19 vaccinations despite the availability of vaccine services. A report conducted by the Center for Countering Digital Hate (CCDH) found that 31 million people follow anti-vaccine groups on Facebook, with 17 million people subscribing to similar accounts on YouTube (Burki 2020). These social media groups are known for spreading misinformation and fear surrounding the COVID-19 vaccines (Burki 2020). This misinformation not only spreads distrust in public health organizations, but also affects the end goal of mitigating the spread of COVID-19 through building herd immunity.

The question then arises of the best way to encourage and ensure that the US population continues to vaccinate themselves against COVID-19 in order to protect vulnerable populations, as well as attempt to restore the economic status, education format, and social benefits available to us prior to the pandemic. Vaccine mandates have been a controversial topic in the United States due to the large population of vaccine-hesitant citizens. The current vaccine mandate established by President Biden in September of 2021 requires COVID-19 vaccinations for Federal employees and contractors as well as health care workers. These individuals must show proof of vaccination in order to work and are not presented with a testing alternative. In this thesis, I evaluate the best way to approach policy surrounding COVID-19 vaccinations. First, in section 2, I consider the ethical considerations in evaluating if mandatory vaccinations for the general population of the US should be established. I also address concerns of autonomy and

paternalism that have been raised in relation to mandatory vaccinations. Next, in section 3, I consider an alternative approach to vaccine encouragement that still preserves autonomy in choice: nudges. I address potential objections of unconscionability through the lens of rationality. Then, I consider the specific forms of nudging that are impermissible: those that have no relation to the issue at hand. I finally end by proposing the best ethical response strategy to increase vaccination rates in the United States: a specified form of nudging.

Section 1.2: Response Strategies

In this section, I systematically approach the question of how to approach policy concerning COVID-19 vaccination. There are only two logically possible responses to vaccination: inaction, and action. Inaction is defined in this thesis as a simple lack of policy, or "non-action", concerning vaccinations. In this thesis, action-based responses will consider eliminating choice by mandating COVID-19 vaccinations, or preserving choice through nudging and simply encouraging COVID-19 vaccinations. I will taxonomize the responses in order to determine the most ethically feasible options. Measures to address vaccination can be divided into 3 response strategies, which I'll call "non-action", "mandates", and "nudges".

The first response strategy regarding vaccination is simply non-action. Here, while vaccination would still be an available option for those who wish to take it, no other incentives or legislation would be made to promote the vaccine. Proponents of

non-action would argue that allowing the COVID-19 virus to take its natural course would build herd immunity through previous infection. However, with the development of new viral strains, such as the Omicron variant of the virus, herd immunity through previous infection is an unreliable method of mitigating the spread of COVID-19 (Centers for Disease Control and Prevention 2021). Furthermore, a study conducted by Cavanaugh et. all found that unvaccinated people who were previously infected by COVID-19 are more than twice as likely than fully vaccinated people to get the virus again (Cavanaugh 2021). This indicates that an inaction-based response strategy would be ineffective at mitigating spread of the virus. Since this response strategy is not feasible considering the developments of variants and the rapid spread rate of the virus, I will set it aside to consider the other potential strategies. This thesis will focus on the viability of the remaining action-based strategies concerning Covid-19 vaccinations: mandates and nudges.

The second response strategy is mandating vaccinations. The mandates I consider here involve requiring all individuals, not just those who work in healthcare, public service, or military, to take the COVID-19 vaccination. This may be implemented by requiring proof of vaccination for workplaces, schools, and even leisure establishments such as retail stores or restaurants. Mandating vaccinations is not a novel concept, as most US states require certain vaccinations, such as measles and chickenpox, before children are able to start school, and some countries require vaccinations for immigration or international travel. The requirement of vaccine documentation for unavoidable activities like education or work essentially eliminates choice by making it so individuals must get vaccinated in order to lead normal life. This elimination of choice is what

characterizes this measure as a mandate. In section 2, I will evaluate and discuss the ethical implications of COVID-19 vaccine mandates, and conclude that mandates are impermissible. I will then address the final viable action based response in section 3: nudges.

The third response strategy for addressing COVID-19 vaccination are nudges. A "nudge" is a concept borrowed from behavioral economics. This term was first coined by economists Richard Thaler and Cass Sunstein, who defined nudges as a manipulation of the choice architecture so that individuals are more likely to choose an option that was best for them (Dworkin 2020). This essentially means the way choices are presented to an individual can affect the decision they choose to make. The choice architecture is the design in which different choices can be presented to an individual, in forms such as order or context, that can alter how an individual considers and chooses options. Nudges can be applied in a variety of realms such as retirement funds, to promote healthier eating habits, and traffic safety. Nudging for COVID-19 vaccinations can be seen in different forms. For example, in some countries, such as Germany, Italy, and the United Kingdom, COVID-19 vaccinations are required for American tourists, as well as proof of a negative test, in order to waive a mandatory 5-10 day quarantine (Whitmore 2021). While this method does not explicitly mandate vaccination for international travel, it manipulates the choice architecture of tourists by making it inconvenient to travel without a vaccination, thereby nudging them to get vaccinated before their holiday. The key difference here between mandates and nudges is that a mandate would eliminate choice by requiring vaccination for travel. A nudge simply guides an individual to choose to get vaccinated as it would be inconvenient to travel without it. Thus,

nudging still maintains options for individuals who travel, but makes one option more favorable for those who wish not to quarantine. Nudging can also be seen in "payment in kind" models that encourage vaccination. Australian philosopher Julian Savulescu describes these payment-in-kind models as ones where explicit financial incentives are not provided to take the vaccine, but rather, social benefits are made available to vaccinated individuals (Savulescu 2020). These can take the form of vaccinated individuals not being required to wear masks in establishments, or even having vaccinated individuals being entered into state or county lotteries. These methods, while not explicitly mandating vaccination, make it inconvenient or undesirable for individuals to remain unvaccinated, thereby nudging them to take the COVID-19 vaccination.

Section 2: On the Ethical (Im)permissibility of Vaccine Mandates

In this section, I will address ethical concerns surrounding the first of these response strategies: mandating vaccinations. I will first define the ethical concept of paternalism and the objections to this theory, since paternalism is the crux of the argument on the ethics of mandating vaccines. Many concerns surrounding mandatory vaccinations often refer back to paternalism as a point of contention, so it is essential to have a grasp on this concept before we move forward. I will then describe how mandatory vaccinations are a form of paternalism. Finally, I will conclude that due to this classification, mandatory vaccinations are objectionable.

Section 2.1: Objections to Paternalism

Paternalism is defined by the Stanford Encyclopedia of Philosophy as the interference, by an individual, organization, or government, with another person or group against their will, justified by the claim that the person interfered with will be better off because of it (Dworkin 2020). Paternalism justifies the infringement on an individual's autonomous choice when the costs to one's freedom is trivial compared to other important values like health and safety. Consider the law mandating drivers and passengers to wear their seatbelts when traveling in a car. This is an example of paternalism because a third party, here the government, interferes with the autonomy of an individual in order to protect them from harm. Here, the loss of freedom is the choice to wear or not wear a seatbelt. Through this paternalistic law, individuals are stripped of the opportunity to choose whether they would like to wear a seatbelt, but it is implemented in order to protect their safety, and the safety of others in the event of a collision. The action of the government deciding on behalf of individuals that they must wear a seatbelt when in a car in order to protect them from harm is paternalistic.

While this instance may seem like a non-controversial interference, it is the limitation of individual autonomy that is the basis of objections to paternalism. One may argue that individuals should have the right to decide on their own what measures of safety they wish to take. I will call the "autonomy objection" the objection to paternalism that rests on the claim that individual autonomy is a necessary and valuable attribute to a person's wellbeing. We have previously discussed how paternalistic measures must aim to maximize an individual's well-being in order to justify an infringement on their autonomy. However, if autonomy is considered necessary and valuable, then any

attempt to minimize autonomy would be considered harmful. Therefore, if paternalism requires a violation of autonomy, and violations of autonomy are harmful, then paternalism would be harmful. Thus, even paternalistic measures made in a person's best interest still infringe on their autonomy, and are thus objectionable (Birks 2014). We will consider the concept of paternalism being objectionable premise 1 of the objection to paternalism concerning COVID-19 vaccinations.

Premise 2 of this argument is that vaccine mandates are paternalistic. One can see how based on this initial definition of paternalism, vaccine mandates are an example of paternalism. This is because it involves a third party, here the government, interfering with the autonomy of citizens against their will in order to serve their best interests, namely mitigating the spread of COVID-19. Even though the measure is made to promote the citizen's best interest, as it is beneficial for the entire population to decrease the spread of the COVID-19 virus, the individual's autonomous right to choose is being infringed on. One could argue that simply requiring vaccinations for schools, workplaces, and leisure establishments is not directly mandating. This is because there would technically be no requirement to be vaccinated simply to exist in the society. However, it is necessary and unavoidable for individuals to pursue education, make money through a job, and pursue enjoyable activities in order to survive in society. Education is compulsory for children in the United States, though the ages they must be in school vary from state to state (SEP 2020). Similarly, without income accrued from working, individuals would not be able to buy food, water, or shelter. Additionally, leisure activities, while not strictly essential, are necessary for physiological and psychological well-being (Pressman 2009). If vaccinations are mandatory for these

aspects of life, this policy essentially causes vaccination to be mandated for life in society. Individual autonomy in terms of vaccination would be described as the right of an individual to choose whether or not to get vaccinated, and still be able to enjoy the benefits of society such as education, employment, and leisure. Thus, mandatory vaccinations are clearly paternalistic, as the decision on whether or not to get vaccinated has been made by the government for the citizens, as there is simply no alternative to live in society without it.

Thus, if paternalism is objectionable, as it infringes on an individual's personal autonomy, and mandatory vaccination measures are clearly paternalistic, premise 3 of the argument follows that mandatory vaccination is objectionable. In the next section, I will discuss a counterargument to the objectionability of paternalism raised by philosopher Seana Shiffrin, that will conclude that mandatory vaccination does not qualify as paternalism, and thus, is justifiable.

Section 2.2: A Revised Concept of Paternalism

Philosophers such as Seana Shiffrin have raised counter arguments to the objectionability of paternalism that would affect the discussion on the ethics of mandating vaccinations against COVID-19. Shiffrin's theory raises an objection to premise 2 of the argument, that mandating vaccinations is a form of paternalism. Shiffrin's objection rests on a new definition of paternalism she provides. This definition asserts that in order for an action to be paternalistic, it must involve the agent acting on another to deem the person being acted upon as inferior or lacking judgment. This will

dismantle the premise of mandating vaccinations being paternalistic, as I will show how the motivations behind mandatory vaccinations do not stem from judgements of inferiority.

Shiffrin defines paternalism as “the unwelcome substitution of one party’s agency or judgment for another’s, in the latter’s rightful sphere of autonomy, that emanates from an implicit or explicit judgment by the former of the inferiority of the latter’s judgment or agency” (Shiffrin 2018). Essentially, this claims that in order for an action to be paternalistic, the party acting upon an individual infringes on the individual’s autonomy since they believe the individual to lack judgment. Notably, the distinction here between the original definition of paternalism provided above, and Shiffrin’s definition, is the assumption that the party whose interests are being acted on is deemed to have inferior judgment or agency.

This definition should be preferred in the discussion surrounding COVID-19 vaccinations since the addition of an assumption of inferiority when making decisions on behalf of another party allows for a higher degree of specificity. This specificity is important when considering a nuanced and complex issue such as mandating vaccination. This is because mandating vaccinations is a public policy concern. In the United States, all citizens are considered to be equal. A government assuming the inferiority of its citizens is objectionable as it would consider the values and decisions of those in political administration as more important than those of citizens. Shiffrin argues that in order for paternalistic measures to be objectionable, they must involve assessments on the inferiority of judgment of consumers. However, if there is no

assumption of inferiority, measures can be taken that make the individual autonomy of the agent being acted on more meaningful by allowing them to devote their attention elsewhere.

Shiffrin provides an example of a water treatment facility to motivate her argument. Feasibly, any individual could take the time and effort to become experts in the pharmacology and technique of water treatment. One might then think that the decision of a state or local community to assign this responsibility to a 3rd party, such as government or individual water treatment plants, is paternalistic. This is because, as asserted in the previous definition of paternalism, the government takes over the treatment of water rather than allowing individuals to choose whether they would like to treat their own water. However, according to Shiffrin, this is not an instance of paternalism. Following from her argument, the government taking over the treatment of water is not a sign of distrust or contempt for its citizens' abilities, but rather a well-motivated delegation of authority. This delegation allows consumers of the water to benefit from the expertise of a few individuals or organizations. Rather than diminishing their autonomy, delegating authority frees up their time and autonomy to pursue other valuable interests.

Thus, Shiffrin contends that by giving up the freedom to treat their own water, individuals actually expand their autonomy by saving the time they would need to learn to treat water. They also make their autonomy more meaningful by putting it towards interests and decisions they may value more. Shiffrin argues that simply because individuals have the capacity to develop a knowledge of water treatment does not

necessarily mean that we must all pursue it, nor does it suggest that acts of social organization or delegation that save us that time are paternalistic. One of the main concerns surrounding paternalism is the fear that autonomy will be diminished through paternalistic measures. However, if measures are taken that do not assume the inferiority of consumers' judgment or ability, but simply allow them to pursue other more fruitful uses of their autonomy, these are not paternalistic.

This argument can be applied to the debate surrounding mandating COVID-19 vaccinations. Here, every individual has the capacity to research the effects of the COVID-19 virus, and the effectiveness and potential risks of the vaccine. However, this research and cost-benefit analysis can be delegated to a 3rd party like the government through agencies like the CDC or FDA. If we were to mandate vaccination under the assumption of citizen inferiority, this would be morally impermissible. This is because it meets Shiffrin's definition of paternalism. Thus, if the motivation behind a government mandating vaccination is based on assumptions of citizens not being reasonable enough to decide for themselves, the measure would be paternalistic, and thus, objectionable.

However, we can also imagine a different approach to vaccine mandates that avoids paternalism. This would be demonstrated if a government's motivation to mandating vaccination stems from a desire to free up the autonomy of its citizens. If the government sought to expand and make the agency of its citizens more meaningful by saving them the time of researching and determining the safety and efficacy of the vaccine, it would be a permissible mandate. This is because there is no assumption of citizen inferiority, and thus, the measure is not paternalistic. While of course there are

other marks of objectionability, for the purpose of this thesis, we may assume that a measure being paternalistic is the mark of it being objectionable. Therefore, if a vaccine mandate, under these conditions, is not paternalistic, then it breaks the premise based argument we have laid out previously. It follows that mandatory vaccinations, without assumptions of citizen inferiority, are not morally objectionable.

That being said, I argue that even this approach to vaccine mandates is morally problematic on the grounds that it does not consider systemic issues. The definition of paternalism, and subsequent argument in favor of mandates brought about by Shiffrin, fails to consider social issues like racism. In the next section, I will introduce a new school of thought concerning paternalism that examines it in a systemic light.

Section 2.3: Individualized vs Systemic Paternalism

While Shiffrin's argument legitimizes mandating COVID-19 vaccinations, I argue that even this approach to vaccine mandates is morally problematic on the grounds that it is highly individualized, and does not consider systemic concerns. The progression of the COVID-19 pandemic in the United States has coincided with an increase in public awareness of racism brought about through numerous instances of police violence towards members of the Black community. Issues of systemic racism have manifested themselves in the COVID-19 pandemic as well. Black Americans are three times as likely as white Americans to contract COVID-19, and once exposed to the virus, are more than twice as likely to die from it (APM Research Lab Staff 2020). The issues of racism that have been prevalent throughout American history indicate that the debate surrounding

a mandatory COVID-19 vaccination must also be addressed through an intersectional lens. This intersectional lens helps us to understand an important source of vaccine hesitancy that has been so far ignored in the discussion. This form of hesitancy comes from marginalized communities due to historical distrust in and abuse from oppressive governmental structures.

Motivations behind vaccine hesitancy vary for Black and White Americans. In order to understand this new kind of vaccine hesitancy, it can be broken down into three components: confidence, convenience, and complacency (Bunch 2021). Confidence encompasses the trust in the vaccine itself, along with healthcare workers that administer the vaccine. Convenience describes factors such as the availability, accessibility, and affordability of the vaccine. Finally, complacency characterizes the perceived risk of the COVID-19 virus itself, and concerns of if the vaccine is even necessary. A study conducted by Quinn et. al found that the types of vaccine distrust exhibited by Black Americans differed notably from those exhibited by white Americans (Quinn 2016). While this study was conducted in relation to the Influenza vaccine, its results can be applied to the COVID-19 vaccination debate. While white Americans' hesitancy towards vaccines is mostly due to issues of competency (i.e. if the vaccine works), Black Americans' hesitancy is mostly due to mistrust in motives. One study participant stated simply that "you don't trust a government vaccine", indicating a lack of trust in the motives behind the call for vaccination. In contrast, white Americans exhibited more concerns surrounding the competency of vaccines, with one white participant stating that they didn't know how the FDA could test a vaccine to make sure it works, but they did trust them to ensure it was safe. To bring the debate surrounding

mandatory vaccinations into an intersectional light, we must address the first of these hesitancy factors, namely the Black community's trust in the healthcare system.

There are numerous historical reasons for Black Americans' distrust in the healthcare system. Most notable are the Tuskegee syphilis experiments that occurred from 1932–1972. The "Tuskegee Study of Untreated Syphilis in the Negro Male," was conducted by the United States Public Health Service (USPHS). Here, Black men in Macon County, Alabama were misled into participating under the guise that they would receive free medical treatment for "bad blood", an all-encompassing term that referred to syphilis, anemia, and other conditions. However, researchers gave them ineffective medicines to maintain the charade that they were treating them while they allowed the disease to progress. Even after penicillin was discovered to be an effective treatment for syphilis, these men were left untreated so that the USPHS could study the long-term effects of the disease. In 1943, the Henderson Act was passed which required treatments for venereal diseases to be publicly funded (McVean 2019). This prompted the USPHS to open "Rapid Treatment Centers" that specifically treated syphilis patients with penicillin, all the while preventing 399 Black men from receiving the treatment.

Additionally, there are numerous instances of implicit bias in the healthcare industry today. Implicit bias is the attitudes or perceptions one can have towards a group of people without conscious reflection (Brownstein 2019). One study found that half of surveyed white medical trainees harbored false beliefs on race-based differences in pain sensitivity, which leads to dangerous impacts in pain management programs as well as misdiagnosis (Hofman 2016). Furthermore, Black newborn babies are three times more

likely to die than white newborns when under the care of a white doctor (Greenwood 2020). These instances show the motivations behind Black Americans' distrust of the US public health system. The historical and current marginalization of Black Americans in healthcare justify their confidence based vaccine hesitancy.

Recall that according to Shiffrin, paternalism requires an agent acting within another's rightful sphere of autonomy for their best interest, under the assumption of the latter's inferior judgment. However, willful delegation of responsibility to a third party to research and determine the safety and efficacy of COVID-19 vaccines, while not paternalistic, requires the basic assumption that the third party does not assume the inferiority of those being acted upon. Shiffrin's account of willful delegation is highly individualized. This philosophy neglects the consideration of racism as a structural and systemic assumption of inferiority. This systemic assumption of inferiority must be considered when proposing public health measures that act on whole populations. This individualized notion of paternalism neglects other forms paternalism can take, especially in instances where there is no singular agent to form the relevant attitudes of inferiority.

I would thus argue for a novel notion of paternalism that is systemic, rather than individualized. There has been a history of autonomy stripping of Black Americans by the public healthcare system in the United States. Thus, mandating vaccines cannot be ethically justifiable as the third party, here the government and healthcare system, strips the agency of Black Americans by not allowing them a choice against a history of autonomy stripping. This action is paternalistic not in the motivations of individuals

conducting the action of mandating vaccines, but rather the effects of these actions on individuals from marginalized demographics. Any modicum of autonomy stripping against a history of systemic autonomy stripping for Black Americans is unethical. The removal of agency of the individual here, cannot be morally justified as it would be considered systemic paternalism.

We have now reviewed various forms that vaccine mandates can take, and ultimately concluded that they are not ethically justifiable. This is because mandates, when applied in the context of COVID-19 vaccinations, are either individually paternalistic or systemically paternalistic. I will then evaluate in the next section the third and final response strategy: nudges.

Section 3: On the Ethical (Im)permissibility of Vaccine Nudges

If we accept that mandating vaccinations is unethical due to considerations of systemic racism, we must then consider another response strategy to facilitate a more agent centered approach to vaccine motivation. Nudging provides an alternative to the problem of agency stripping. As stated previously, this response strategy allows agents or institutions to alter the choice architecture of an individual's decision to encourage them to choose options that would most benefit their wellbeing. Nudges fall under the realm of libertarian paternalism. Libertarian paternalism is the idea that it is possible for institutions or individuals to influence decision making while still maintaining freedom of choice and individual agency. Unlike traditional paternalism which eliminates choice for the agent being acted upon, nudges simply present choices in a

way that individuals are more likely to choose an option that is best for them. It maintains aspects of paternalism solely in that the options nudges guide a chooser towards must promote their good or wellbeing. It is libertarian, however, in that this response strategy preserves an individual's freedom of choice (Dworkin 2020). This preservation of choice indicates how libertarian paternalism, or nudges, succeed where paternalistic measures, like mandates, fail.

Section 3.1: Objections to Libertarian Paternalism

Some objections to nudging stem from the paradigmatic way that nudges bypass conscious reasoning. For this thesis, we can consider conscious reasoning to be similar to economist Daniel Kahneman's system 2 thinking (Kahneman 2013). Kahneman distinguishes thinking into two forms, system 1 and system 2. In system 2, thinking is characterized as slow, methodical, and, while it requires conscious effort, is more resistant to bias. On the other hand, system 1 thinking is likened to unconscious reasoning. In system 1, thinking is fast, automatic, and susceptible to bias. Nudges can sometimes bypass conscious reasoning, and thus engage system 1 style thinking. By manipulating the choice architecture, nudges present options to the agent in a way that subconsciously encourages them to choose an option that is better for them. This can be accomplished through behavioral economics heuristics, wherein the way choices are presented can influence which decisions agents lean towards making (Yan 2019). For example, in opt-out programs where a choice is set as the default, one would need to opt-out of that choice if it wasn't desired. As you can see here, the action of opting-out of a choice is effortful, whereas accepting the default choice is easy and automatic. Thus,

agents might be incentivized to simply accept the default choice, rather than consciously deliberating and choosing.

The act of bypassing conscious reasoning can be considered morally objectionable. Philosophers such as Evan Riley support this claim by asserting that conducting public policy by nudges fails to treat people as reasoning beings (Riley 2017). We have established that the preservation of individual choice frees nudges of the ethical impermissibility of mandates. This is due to nudges maintaining agency for communities that have historically and systemically been stripped of autonomous choices. However, it can be argued that, since nudges act on unconscious processes, they do not engage agents as rational actors. Thus, it would be morally objectionable if the nudges utilized to encourage vaccination against COVID-19 run afoul of the condition to treat people as rational agents.

The concept of nudges acting on unconscious processes being objectionable stems from the assumption that unconscious processes are not rational. However, this method of thought fails to consider the ways that unconscious deliberation and rationality interact. Philosophers such as Neil Levy assert that there are some unconscious processes that influence conscious rational deliberation, and there are some fully rational unconscious processes (Levy 2019). Unconscious mental processes that leave agents susceptible to nudges are operative throughout daily life. So, if conscious awareness is fundamentally necessary for autonomous deliberation, it would follow that all individuals are substantially less autonomous than previously assumed (Doris 2015). If we assume that agents act autonomously when allowed to maintain choice, the influence of unconscious

mental processes should not matter. Thus, autonomy should be viewed not in the context of unconscious or conscious deliberation, but rather through the eye of rationality, and the ability for agents to engage in rational decision making.

Section 3.2: Agent-Centered Nudging

The condition preserving rational decision making can be implemented in some forms of nudges encouraging vaccination against COVID-19. This theory, rather than objecting to nudges entirely, provides a guide for which interventions are morally acceptable and which are not. Nudges that fail to meet this principle are ones that do not provide a relevant association to the issue at hand. In the case of COVID-19 vaccinations, objectionable nudges would be those whose consequences or benefits provided contain no relation to the COVID-19 pandemic. For example, a nudge that offered entrance into a state or county lottery for individuals who chose to get vaccinated would be objectionable. This is because a monetary incentive is a benefit to the nudge to get vaccinated that has no relation to the COVID-19 pandemic. The lack of relation to the issue being nudged for is what makes this intervention morally problematic. This nudge places individuals of low socioeconomic status at a disproportionately influenced choice architecture as they would be more incentivized to get vaccinated simply due to the potential for monetary gain. When compared to individuals of higher socioeconomic status, less wealthy individuals would experience an unequal benefit from the lottery. Consequently, a financial incentive nudge influences their ability for rational choice more than their higher socioeconomic status counterparts. This unequal rational choice

contributes to a systemic financial inequity in the United States, and thus ethically fails for the same reasons as systemic paternalism.

Alternatively, nudges that maintain the condition of rational choice are those that contain a direct relation to the issue concerned. For example, some states, such as California, Connecticut, and New York, have implemented laws that allow vaccinated individuals to be exempt from the mask mandate (Hubbard 2021). While this still allows individuals to decide whether or not they want to get vaccinated, it provides a small incentive that is relevant to the COVID-19 pandemic to those who choose to get vaccinated. Individuals that choose not to get vaccinated are not harmed by this incentive, and individuals that choose to get vaccinated are deemed as having a lower likelihood of spreading the COVID-19 virus, and are thereby not required to wear a mask. Similarly, a nudge that allows vaccinated office workers to have free roam of their office building, while unvaccinated workers must remain on a specific floor to minimize the spread of the virus, would not be considered objectionable. This is since all individuals can engage as rational agents because the implications of getting vaccinated are directly related to the pandemic and mitigating viral spread.

The ethical permissibility of nudges depends on the extent to which they engage an individual as a fully rational agent. The preservation of choice allows for the individual to maintain autonomy. Thus, nudges succeed where mandates fail in relation to systemic paternalism. Nudges have their own limitations though. In order to engage an agent as fully rational, the nudger must ensure that the individual being nudged can make a decision within a rational choice architecture. Nudge incentives or consequences

that do not relate to the nudge itself do not allow the agent to engage in fully rational decision making. This is since there are other factors to consider that may skew their decision making away from the issue at hand: here, COVID-19 vaccinations. It then follows that nudges toward COVID-19 vaccination are morally permissible when they operate within the relevant sphere of the pandemic, as they allow for the preservation of autonomy and engage the agent as a rational actor. The action of maintaining choice and engaging an individual as a rational decision maker is entitled in this thesis as an "agent-centered" approach to COVID-19 vaccinations.

Section 4: Conclusion

This thesis has attempted to determine an ethically feasible response strategy towards encouraging COVID-19 vaccination uptake. The global crisis and emergence of new variant strains necessitates an action based response strategy in order to mitigate the spread. We have determined that a paternalistic approach is not morally permissible due to the value of individual autonomy. A mandate-based approach, even when conducted without assumptions of inferior citizen judgment, still fails to consider issues of systemic agency-stripping. Mandates remove autonomy through the elimination of choice. Removing autonomy against a history of similar agency stripping cannot be supported. We must then consider approaches to COVID-19 vaccinations that maintain individual choice and autonomy. Though nudges operate on unconscious decision processes, these processes operate through all areas of life. Autonomy should then be considered through rational choice. In order to maintain rational choice when nudging,

the incentives or compromises raised in the nudge must operate within the context of the decision being made. Here, the decision presented to individuals is on whether or not to take the COVID-19 vaccine. So, the elements of the nudge must relate to the vaccine and pandemic, rather than external considerations like finances. The response strategy that can be morally supported is an agent-centered approach to nudging that allows full preservation of an individual's rational agency and autonomy by providing them with the ability to choose, and maintaining the consequences of their decision to be directly related to the COVID-19 pandemic.

As of November 8, 2021, there have been a total of 49.5 million COVID-19 cases in the United States (Allen 2021). The effectiveness of COVID-19 vaccines in mitigating and reducing the spread of the virus necessitates that policy makers consider efforts to increase vaccinations amongst citizens. Currently, 60% of the US population is vaccinated against COVID-19 (Ritchie 2020). In order to build herd immunity against the virus, and attempt to mitigate this global health crisis, ethical action should be taken to promote vaccine uptake. Nudge based policies should be developed and instituted in order to encourage vaccination against COVID-19 in an agent-centric manner.

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