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Coercion or Persuasion:
Ethical Strategies Leaders Should Use
to Increase COVID-19 Vaccination Uptake

Thesis presented

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Abstract

Coercion or Influence: ethical strategies leaders should use to increase COVID-19 vaccination uptake

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The COVID-19 pandemic, which has led to millions of cases and deaths around the world, persists, in large part, due to vaccine hesitancy. Through interrogating the harm principle and exploring ethical justifications of influence, this thesis seeks to determine justifiable strategies leaders should use to increase COVID-19 vaccination uptake. I will argue that lesser forms of coercion—such as vaccine mandates—are justifiable, in principle, but ought not to be used by agents due to concerns for liberty and trust, and the presence of less restrictive alternatives. Thus, leaders should use influence strategies to motivate behavior change from the vaccine hesitant.

Introduction

Early in the COVID-19 pandemic, messages to lay people from the Centers for Disease Control and Prevention (CDC) contained alarming inconsistencies and raised questions about the truth behind those messages. One inconsistency that arose involved the use of personal protective equipment (PPE). In March 2020 in the United States, citizens began to panic and purchase, hoard, and misuse disposable medical face masks to protect themselves and their families from the impending COVID-19 virus. In just a couple of weeks, due to this rapid increase in demand and lack of supply, healthcare workers faced a shortage of PPE to protect themselves and their patients from the spread of disease.[1] As a response, the CDC sent out a barrage of messages—through Tweets, press releases, and other public statements—urging people to stop the bulk purchasing of protective equipment; as a result, lay citizens believed the COVID-19 situation was less dire than it truly was. U.S. Surgeon General Jerome Adams went as far as to tweet in February of 2020, "Seriously people- STOP BUYING MASKS! They are NOT effective in preventing general public from catching #Coronavirus, but if healthcare providers can't get them to care for sick patients, it puts them and our communities at risk."[2] The CDC's motivation for this messaging response was not to assuage fears about the COVID-19 virus but, rather, to discourage people from monopolizing the PPE supplies that healthcare personnel and frontline workers desperately needed.

Public health messaging changed in the spring of 2020, as studies began to reveal that face coverings and social distancing measures had the potential to slow the spread of the virus, especially among asymptomatic people. Because of their lack of transparency and mixed

[1] "Shortage of Personal Protective Equipment Endangering Health Workers Worldwide."
[2] Adams, Twitter.

messaging, not only were thousands of lives disregarded; but public health officials also lost credibility in the eyes of many Americans. While this lapse of credibility can be weighed against the lives saved by the properly protected healthcare workers, it remains unclear how many lives were lost due to the CDC's lack of transparency. This anecdote serves as a testament to the immense power of public health messaging; when the CDC instructs people to do—or not to do—something, they generally tend to listen, for better or for worse.

Over the past two years, the pandemic has claimed the lives of over 980,000 United States citizens, and 6 million people worldwide, and accrued 500 million confirmed cases around the world. During this time, we have seen how the influential power of the CDC and other public health leadership has affected our daily lives. When the pandemic topic of focus shifted to vaccination in mid-March of 2021, we initially saw great interest and uptake of a viable treatment that was both safe and effective and guaranteed by leadership to decrease the immense impact COVID-19 was wreaking on our lives.

By mid-March 2021, President Biden announced that all Americans would be eligible for the vaccine within weeks, solidifying the astounding timeline of scientific advancement and public health labor. By the end of April, however, the United States began to see a vaccination slowdown, as the rate of Americans receiving the vaccine declined 20 percent in just two weeks. To date as of the writing of this thesis, the Kaiser Family Foundation COVID-19 Vaccine Monitor has reported that 73% of Americans have already received the COVID-19 vaccine, 4% are taking the "wait-and-see" approach, 3% will get vaccinated only if it is required, and 16% are "definitely not" going to get vaccinated.[3] By February 2022, vaccination clinics around the

[3] "KFF COVID-19 Vaccine Monitor Dashboard."

country were seeing the lowest number of first-time vaccines since December 2020—at an average of just 76,000 Americans per day.[4]

My thesis begins with a problem: 27% of American adults are opposed, for one ideological reason or another, to getting the readily accessible and available COVID-19 vaccine. Namely, I am concerned with the phenomenon of vaccine hesitancy, one cause that I believe is why we have been unable to see the end of the pandemic in over two years of surviving through it. My goals with this thesis are as follows: as I believe ethical leadership is the solution to determining a way out of the pandemic, I am interested in examining moral considerations leaders should address when deciding how to increase COVID-19 vaccination uptake. The moral considerations I draw upon throughout this thesis will include topics related to trust, consent, autonomy, personal liberty, public good values, and more.

At the outset, I am positing that although this thesis draws upon the science related to vaccination, the primary concern of this thesis is on philosophical ethics and the debate regarding how leaders ought to act to address vaccine hesitancy, and assumingly, invoke behavior change from vaccine hesitant targets. As such, this thesis will include three chapters that help readers better understand the ethics of strategies that leaders should take. Chapter 1 will broadly examine the problem of vaccine hesitancy. I will begin by defining the problem and analyzing the historical arguments that help explain why vaccine hesitancy persists today. The main arguments that I claim have created and sustained vaccine hesitancy are as follows: there is a clear expression of government skepticism based on both practical considerations and principled considerations. My goal in Chapter 1 is to work through the rationale for this government

[4] Petriczko, "First-Time Vaccination Rates in the U.S. Are at a New Low."

skepticism to better understand why we see such prominent displays of COVID-19 vaccine hesitancy. I will then develop arguments for the strategies leaders ought to consider for addressing vaccine hesitancy: coercion, influence, and total liberty. As I am focused on coercion and influence as the main strategies for consideration, after ruling out a total liberty approach, my first chapter will end by concentrating on the philosophical history of coercion (namely, vaccine mandates) in the United States.

Chapter 2 is focused on the permissibility of using coercion to increase vaccination uptake. I will begin by looking at the classic, liberal argument based on the harm principle, relying on both John Stuart Mill and Joel Feinberg's conceptions of harm. Then, I will apply the harm principle to non-vaccination by analyzing Jessica Flanigan's defense of compulsory vaccination. Finally, I will create a theoretical case of a hypothetical COVID-19 vaccine that sets the bar for coercion extremely low, which will lead me to conclude that using coercion as a method to increase vaccination uptake is justifiable, in principle.

In Chapter 3, however, I will qualify that conclusion by arguing that while justifiable, in principle, coercion should not be turned to by public health leaders seeking to address vaccine hesitancy, out of concern for the least restrictive alternative principle and trust problems in public health. Relying on the least restrictive alternative principle, I will show that if there are equally effective tactics that restrict a target's liberty the least, agents ought to use those tactics instead of coercion. Therefore, I will instead make the argument that influence strategies are ethical and effective ways through which leaders can increase vaccination uptake. I will specifically analyze two principles of influence provided by Robert Cialdini, authority and social proof, which I believe are the strongest candidates from Cialdini's principles for addressing vaccine hesitancy. Because influence tactics are more effective and less restrictive on a target's

liberty than coercion, it will follow that public health agents are permitted to use influence to increase vaccination uptake.

To conclude this thesis, I will argue that not only are leaders permitted to use influence in the case of addressing vaccine hesitancy, but also they have a supererogatory moral claim to increase vaccination rates and *ought* to use influence to do so.

Chapter 1

Introduction

In early January of 2020, worldwide news began disseminating reports of a novel coronavirus discovered in Wuhan, China. Just days after the first reports of this mysterious disease began circulating, the first death in the region as a result of the virus was recorded. In the weeks and months that followed, this novel coronavirus saw exponential growth in China and globally, as the virus reproduced and spread at catastrophically high rates before countries had taken adequate steps to slow the virus in its path.

On March 11, 2020, the World Health Organization (WHO) declared the coronavirus outbreak to be a pandemic. A pandemic is an outbreak on a global scale, surpassing outbreaks that qualify as an endemic status, which is defined by a sudden increase in virus cases in a contained location. The WHO's designation of the COVID-19 pandemic was a landmark; it was the first of its kind since the 1918 influenza pandemic, which, during its time, accrued approximately 500 million cases and 50 million deaths worldwide. By April 28, 2020, the United States officially passed one million confirmed cases of the COVID-19 virus.[5] What ensued across the world at this time were country-wide lockdowns as governments and health organizations attempted to slow, if not stop, the spread of the virus. In the United States, under Former President Donald Trump and the CDC, the slogan "#TwoWeeksToStopTheSpread" was coined and disseminated, as the country tried closing to better contain the spread of the disease. During this period, schools were canceled, non-essential work was shifted to virtual platforms, and mask-wearing and social distancing were introduced, in addition to other, retroactive public

[5] Research, "Covid-19 Pandemic Timeline Fast Facts."

health measures. At this point in the pandemic, while cases were rampant, so was hope that the disease was containable.

In just under a year from the beginning of the pandemic, rapid scientific advancements fostered the creation and distribution of multiple COVID-19 vaccinations in the United States. By December of 2020, the Food and Drug Administration (FDA) authorized the emergency use of two vaccines to combat COVID-19: the Moderna and the Pfizer-BioNTech vaccines. In the time that has passed since the initial distribution of the vaccinations, and the additional developments of others, 2021 began with a goal to end the pandemic. By July of 2021, continuing into the beginning of 2022, however, new and extreme variants began to appear as mutations of the original strand of the COVID-19 virus continued to spread.

Now, governments around the world regularly introduce new policies to legislate the pandemic, as they attempt to use political power to support measures that they hope will help limit the human, economic, and social toll caused by COVID-19. Such policies include mask mandates, vaccination ordinances, economic subsidies, social support programs, and more. Of focus for this thesis are ordinances relating to COVID-19 vaccination.

As vaccination continues to be one of the greatest scientific advances to fight against communicable diseases, I am asserting that achieving high COVID-19 inoculation rates will be the key to stopping the spread of the virus. At this point, data shows we have COVID-19 vaccines that are highly effective at preventing severe responses to the virus. Recent empirical studies have found that the Pfizer-BioNTech vaccine is 95.3% effective, according to the FDA, at preventing severe disease.[6] Against earlier mutations and over time, it has been reported as

[6] Katella, "Comparing the COVID-19 Vaccines."

being 88% effective against symptomatic disease and 96% effective against severe hospitalization.[7] Similar research has found that the Moderna vaccine has roughly a 90% efficacy rate against infection and 95% rate against severe illness, after six months from the time of inoculation.[8] And finally, Johnson & Johnson reportedly has 72% overall efficacy and 86% efficacy against moderate-to-severe disease.[9]

These statistics, differing by just mere percentages, make the narrative about COVID-19 vaccination clear: the vaccines that are currently available are effective at preventing illnesses associated with the communicable COVID-19 disease. Not only are they effective at preventing illness but they are effective at preventing death. As we move from mutation to mutation, public health officials fear the creation of a "supervariant," which has the potential to be far deadlier than any of the current and previous variants we have seen.

This brief detailing of the COVID-19 pandemic, as we live through an era notably defined by the global outbreak of the virus, is not a reduction of the importance of the virus's timeline. Rather, it is to introduce vital foundational information so that we can begin to understand the urgency—morally, socially, environmentally—involved with ending the pandemic. As disease incidence rates continue to be staggeringly high, and vaccination rates stagnate, we are left with a problem. Despite having an effective vaccine that is exceptionally available, a huge population is refusing to take it. I believe that vaccine hesitancy is the problem that poses the greatest threat to the goal of ending the pandemic.

The Historical Arguments for Vaccine Hesitancy

[7] Katella, "Comparing the COVID-19 Vaccines."
[8] Katella, "Comparing the COVID-19 Vaccines."
[9] Katella, "Comparing the COVID-19 Vaccines."

Vaccine hesitancy is the phenomenon of able-bodied people who have access to vaccinations but refuse them because they perceive them to be unsafe or unnecessary. Vaccine hesitancy is not a new problem in public health but jeopardizes communities by increasing the risk of infection among susceptible populations. As vaccine-preventable diseases (VPD) necessitate high vaccination uptake, vaccine hesitancy presents a threat to achieving the goal of disease eradication.[10] For as long as vaccinations have existed, so has hesitancy upheld by those who question the science of immunization, believe in alternative treatment options, and hold overriding moral or ideological beliefs that are superseded over vaccinations and vaccination policies, among others. In 2019, WHO denoted vaccine hesitancy as one of the top 10 threats to global health, further indicating the threat it poses to communities locally and worldwide.[11]

It is difficult to accurately categorize attitudes toward vaccination. The heterogeneous populations of vaccine hesitant people generally display attitudes toward vaccination that range from accepting some vaccines to denying others. As such, people in this group can be hesitant toward specific vaccines or vaccination in general. Researchers have uncovered various models that help categorize hesitant attitudes toward vaccination. According to Dubé et al., vaccine hesitant populations fall in the middle of "a continuum ranging from active demand for vaccines to complete refusal of all vaccines."[12] Keane et al. denoted four groups of vaccine hesitant people in their survey study of parents: those who believed in the benefits of vaccination but were hesitant toward some, those more cautious about accepting vaccination, those skeptical of vaccination, and those distrustful of vaccination.[13] Other studies have developed a framework to

[10] Dubé et al., "Vaccine Hesitancy," 1763.
[11] Sreedhar and Gopal, "Opinion | Behind Low Vaccination Rates Lurks a More Profound Social Weakness," 1.
[12] Dubé et al., "Vaccine Hesitancy," 1764.
[13] Keane et al., "Confidence in Vaccination," 2488.

determine the "individual person-level determinants for vaccine hesitancy: confidence, complacency, convenience (or constraints, risk calculation, and collective responsibility."[14] Referred to as the 5C model, it can help predict who will and will not be vaccine hesitant. Such models as these three listed are helpful for grouping attitudes about vaccine hesitancy generally.

To begin to understand potential explanations for COVID-19 vaccine hesitancy, it is prudent to explore socio-cultural factors. Socio-cultural factors, in addition to historical, political, and economical factors, such as demographics, relationships with the healthcare system, community influence, social norms, and more, can help us learn what works and what does not when it comes to combating vaccine hesitancy.[15]

I am particularly interested in examining vaccine hesitant attitudes exhibited by one large socioeconomic group. In the United States, the group that has exhibited initial and continued hesitancy toward COVID-19 vaccination uptake has been those of a lower socioeconomic status (SES). We can view the COVID-19 vaccination hesitancy problem from a larger socioeconomic context. We can see certain subgroups of our population of interest expressing the sentiment that COVID-19 vaccination and its accompanying policies impose an infringement on individual liberty. We can also understand the problem as it is specific to COVID-19. Many of those of a lower SES express hesitancy toward the vaccine because of perceptions that it was developed too quickly, and it utilizes medical technology that is not as common, among other reasons.

I. Government Skepticism Based on Practical Considerations

[14] Cited in Machingaidze and Wiysonge, "Understanding COVID-19 Vaccine Hesitancy," 1338. It is relevant to note that the research that produced the 5C model was done in high-income countries. While this is helpful for our analysis of vaccine hesitancy within the United States, the framework is not necessarily generalizable to other countries that may be considered low-income and/or lower-middle-income countries.
[15] Dubé et al., "Vaccine Hesitancy," 1765.

While I will classify the main cause of vaccine hesitancy as the individual liberty consideration, I want to discuss what has led us to understand the issue from this perspective. I believe we can attribute concerns for individual liberty—and the possibility of the government infringing on such a right through public health action—from two perspectives: practical and principled frameworks. In this section, this thesis seeks to explore the history of government skepticism based on practical considerations, to understand vaccine hesitancy demonstrated by those of a lower SES. I specifically would like to understand this as it relates to the ideas of public health trust and distrust, which I believe is of particular concern to Black and Brown Americans who are of a lower SES, a population that has consistently displayed hesitancy toward taking the COVID-19 vaccine.

Broadly speaking, I believe that distrust in public health—and therefore, a potential source of vaccine hesitancy—can be attributed to the weakening of the common good sentiment. The idea of a common good, originated by Plato, Aristotle, and Cicero and more recently defined by John Rawls, is "certain general conditions that are…equally to everyone's advantage."[16] A common good is typically protected by systems and institutions and upheld through collective population support. Examples of common goods include public healthcare, public safety and security, a legal system, an unpolluted environment, strong economies, and more.[17]

Perceiving public health as a common good means governments are those who are supposed to protect the good and private citizens are those who must support the good through its utilization. We run into social, political, and economical problems when the common good of healthcare is not upheld by the very institutions we entrust with its protection. A recent *New York*

[16] Velasquez et al., "The common good," 1.
[17] Velasquez et al., "The common good," 1.

Times opinion piece argues that in the United States, we no longer view public health as a collective endeavor.[18] The article claims that this is due to the destruction of healthcare budgets and privatization of certain, basic services.[19] If we go back to the 1950s, during the height of the polio epidemic, many people believed vaccination was a civic duty. Fast-forward to the 1980s, however; there was a shift in how the government viewed and publicized the common good of healthcare. Instead of advertising the idea of healthcare as a common good, the government advertised that health and well-being were the responsibility of the individual.[20] This shift in sentiment seemingly aligns in time with the AIDS epidemic, when levels of discrimination and stigmatization against specific groups were at an all-time high.

As a result of this shift toward individual responsibility, the common good of healthcare in the United States was no longer as compelling. When people no longer view public health collectively, as something they all buy into so that they can all reap the benefits of it, they are poised to no longer protect the system. I am asserting that this is one potential reason why there is vaccine hesitancy among lower SES; as the common good of public health erodes over time, people who are disenfranchised by its erosion become wary of participating to further a collective goal that does not include or protect them.

When it comes to discussing the issue of autonomy within public health, I feel it important to talk about why specific subgroups have been vaccine hesitant. One subgroup of interest is Black communities of a lower SES. Studies have shown that COVID-19 vaccine hesitancy was remarkably high among Black communities—and those of other marginalized racial and ethnic identities—regardless of SES. Out of all American adults, the prevalence rate of

[18] Sreedhar and Gopal, "Opinion | Behind Low Vaccination Rates Lurks a More Profound Social Weakness," 2.
[19] Sreedhar and Gopal, "Opinion | Behind Low Vaccination Rates Lurks a More Profound Social Weakness," 2.
[20] Sreedhar and Gopal, "Opinion | Behind Low Vaccination Rates Lurks a More Profound Social Weakness," 3.

COVID-19 vaccination hesitancy in April 2021 was 26.3%; in contrast, the prevalence rate of vaccination hesitancy among Black people during that same month was 41.6%.[21] Previous studies have found that Black people have faced experiences in healthcare that make them more distrustful of vaccinations and healthcare institutions. Other possible contributors to high rates of vaccine hesitancy among Black people during the early stages of the pandemic were: "reduced access to healthcare, less research evidence with African American participants in studies, lower awareness and educational attainment, and history of the Tuskegee Syphilis study's ethical misconduct."[22]

One study exploring the saliency of vaccine hesitancy among minority populations quotes one focus group member from Long Island, who spoke about the impacts of distrust on their decision to refrain from getting vaccinated:

> We have such a long history in this country being experimented on unwillingly or without informed consent, and I know that we are all taught that and it's . . . almost embedded in our culture. We all know about Tuskegee, we all know what happened to the slaves. We're not taught that in school but taught that by our own. And so when you talk about vaccines and when you talk about getting them, someone always brings it up. And so there's an inherent mistrust.[23]

While there is an extensive history of unjust and unethical surgical experiments on Black people in the United States, the Tuskegee experiments remain some of the most notorious and are a common theme in available literature that explores historically unethical healthcare practices. The Tuskegee experiments, taking place in Macon County, Alabama, were disguised to

[21] Khubchandani and Macias, "COVID-19 Vaccination Hesitancy in Hispanics and African-Americans," 1.
[22] Sharma, Batra, and Batra, "A Theory-Based Analysis of COVID-19 Vaccine Hesitancy among African Americans in the United States," 2.
[23] Strully et al., "Strategies to Address COVID-19 Vaccine Hesitancy and Mitigate Health Disparities in Minority Populations," 5.

unknowing Black men as a free medical treatment for rheumatism or stomach problems. Signs were posted around the small town—populated by a majority of Black and poor people—advertising: "Free Blood Test; Free Treatment, by County Health Department and Government Doctors. YOU MAY FEEL WELL AND STILL HAVE BAD BLOOD. COME AND BRING ALL YOUR FAMILY."[24] While the men who signed up to get treatment were promised free food and physicals and other benefits, they were never told of the true purpose of their involvement: they were being recruited for a secret experiment run by the U.S. Public Health Service called, "Tuskegee Study of Untreated Syphilis in the Negro Male." The experiment was made up of 399 Black men who had been diagnosed with syphilis and 201 who were in the control group.

Throughout its duration, researchers never received informed consent from any of the men for their participation, and they never told those who had been diagnosed with syphilis that instead of being treated for the deadly venereal disease, they were being watched until they died and studied for effects of the disease after.[25] It was not until over 20 years after the conclusion of the 40-year-long study that Former President Bill Clinton issued a formal apology to survivors of the study. By that point, however, a legacy had been created, one that endures today: minority populations do not have trust in the United States medical system due to coercive and unethical healthcare practices.

Historically stigmatized and disadvantaged groups are more likely to have low levels of social trust in institutions generally. When there is an intersection of identities, such as those of marginalized racial or ethnic groups who are also part of a lower socioeconomic group, it follows

[24] Brown, "'You've Got Bad Blood.'"
[25] Brown, "'You've Got Bad Blood.'"

that there is a compounding social distrust stemming from each disadvantaged identity. This phenomenon can help explain why lower-class Black Americans have struggled with high levels of vaccine hesitancy throughout the COVID-19 pandemic.

II. Government Skepticism Based on Principled Considerations

The second argument to explore as a general symptom of vaccine hesitancy is government skepticism due to principled considerations. Too often in public health, values of liberty and freedom tie into sentiments of mistrust. Many believe that there is a conflict between asserting their liberty and supporting public health goals. Related to the erosion of the common good sentiment of public health, there is an idea in those of a lower SES that they have an "individual right to choose" what goes into their body. While this right, to protect one's liberty, is not contested in public health, an inflated sense of individual freedom leads to decreased support for the public good, or the good of the community overall. This is heightened in lower socioeconomic classes in part due to complicated risk-benefit assessments that those populations must undertake routinely.

For instance, research has shown that COVID-19 vaccine uptake in wealthy classes is incredibly high—well above the needed levels to protect herd immunity. A possible explanation for this is that those with a higher SES do not have the burden of confronting risk-benefit assessments in their daily lives; in other words, COVID-19 poses one of the gravest (if not the gravest) threats to their lifestyle and well-being. As a result, those of a higher SES are more likely to take the vaccine to get rid of this threat.[26] People of a lower SES do not share the luxury of having the ability to face one threat at a time, head-on. These populations face grave

[26] Sreedhar and Gopal, "Opinion | Behind Low Vaccination Rates Lurks a More Profound Social Weakness," 4.

threats daily, some of which supersede the threat posed by COVID-19.[27] When we combine this idea with already existing levels of mistrust against social institutions that they feel do not protect them, we are left with those of lower SES not buying into the common good of public health.

III. COVID-19-Specific Vaccine Hesitancy

Besides observing vaccination hesitancy as it relates to autonomy and liberty more generally, we also see a lack of vaccination confidence specific to the COVID-19 vaccine. Among vaccine hesitant populations, there is hesitation due to the speed in which the vaccine was developed, the uncommon technology (mRNA) that was utilized, as well as possible side effects down the line in receiving the vaccine. In reality, the COVID-19 vaccines were developed with the same process of phase one and phase two trials that other vaccines used, and it was only phase three (the large-scale part of the trial) that was conducted more rigorously. There is also persistent doubt about the mRNA, or messenger RNA, technology that is used in the vaccines. However, mRNA vaccines have been under examination and used in experimental trials for over a decade, sourcing back to the original SARS-COV-1 disease in the early 2000s.

Finally, it is common for vaccine side effects to show up in two or fewer months after full vaccination status is reached. To date, there is no evidence that there are any risks associated with the COVID-19 vaccine that have not already shown up and that objectively outweigh the benefits of receiving the vaccine. While these reasons show a lack of vaccination confidence specific to the COVID-19 vaccine, I turn now to analyzing the best ways to address the ethical concerns related to increasing vaccination uptake.

[27] Sreedhar and Gopal, "Opinion | Behind Low Vaccination Rates Lurks a More Profound Social Weakness," 4-5.

The Strategies to Consider: Making, Getting, and Letting

We can use a spectrum to think about the range of strategies that leaders can use to address vaccine hesitancy, trifurcated along the lines of coercion, influence, and liberty, or, as coined by Terry Price: making, getting, and letting.[28] "Making" in this context is using coercion to increase vaccination uptake. "Getting" is using middle-ground influence tactics. "Letting" is allowing people to have unadulterated liberty to decide whether to get vaccinated. Price notably remarks, "Negotiating the territory between force and freedom, which includes everyday ways of getting people to do things, constitutes the distinctive moral challenge associated with the exercise of leadership."[29] My interest in studying the problem of vaccine hesitancy from the perspective of possible ethical strategies leaders can use stems from a general concern that I and many others share with the state automatically deferring to the use of coercion. While I admit, and will further examine in the following chapters, that it would be highly effective to use coercion to increase COVID-19 vaccination, I hold concerns about the overreach and encroaching of state power, and intrinsic rights to liberty and autonomy. Therefore, I propose we use Price's spectrum of potential strategies leaders can take as a starting ground for our examination of methods to address COVID-19 vaccine hesitancy.[30]

I. Total Liberty Approach

[28] Price, *Leadership and the Ethics of Influence*, 9.
[29] Price, *Leadership and the Ethics of Influence*, 9.
[30] Although referring to this as a spectrum, for reasons that will become clear, I believe a total liberty and coercion approach are more implicitly connected (through their implications on harm—collective harm for a liberty approach, and individual harm for a coercive approach) than the diagram of a spectrum provides. Thus, we can think of this "spectrum" to look more like a horseshoe shape, with liberty on one end, coercion right across on the other, and influence the furthest away in the middle.

To begin, I will assume the position throughout this thesis that a total liberty—"letting"—approach is neither effective nor morally permissible for increasing COVID-19 vaccination uptake. While autonomy is of concern and will be considered a valid argument along the way, leaders should not allow people complete and total liberty to do what they want when it comes to vaccination, as doing so would lead to a surge of unnecessary deaths. Public health notably differs from other types of healthcare; while one's personal healthcare is a negotiation between oneself, their action, and their healthcare provider, public health requires collective, concerted action to serve its intended population, the public. The definition of public health has varied considerably over time. There is an explicit social justice orientation of public health and public health efforts, as actions that promote the public's health attempt to universally promote access to better health, across siphoned communities and diverse populations. While this framework does not alone legitimize the field of public health, it clarifies an interest that must be a focal point in public health discourse: collective action to promote the health of all. One more recent definition of public health, to bring to bear the importance of united action in the discourse, defines public health as:

> "Collective action for sustained population-wide health improvement"[31]

This proposed definition can be broken down as such:

> This definition emphasises the hallmarks of public health practice: the focus on actions and interventions that need collective (or collaborative or organised) actions; sustainability (ie, the need to embed policies within supportive systems); and the goals of public health (population-wide health improvement and the reduction of health inequalities). *[sic]*[32]

[31] Beaglehole et al., "Public Health in the New Era," 2084.
[32] Beaglehole et al., "Public Health in the New Era," 2084.

In choosing to highlight this specific definition of public health, I agree that public health requires collective action from whole populations to attain the widespread promotion of certain health goals. Vaccination is a specific health goal that is promoted by public health and not privatized, individual healthcare for this reason: to wholly benefit the community and to stop disease transmission, there must be an acceptance that disease control is a collective responsibility. There has been and continues to be controversy in public health when governments attempt to regulate individuals' behaviors to promote health goals; the main goal of this thesis is to explore ethical strategies leaders should adopt to promote vaccination uptake. However, at this point in this thesis, I am concluding that it is not permissible to assume a laissez-faire, total liberty approach toward vaccination due to the lack of uptake in the public we would be bound to see, and the inevitable increases in cases and deaths from which communities would be left reeling. Simply stated, I believe using a total liberty approach would lead to collective harm, and therefore is morally impermissible.

Thus, this total liberty approach to vaccination should not be considered by leaders as a strategy they ought to use to address vaccine hesitancy. By dismissing the "letting" argument, I turn toward discussing "making," or coercion, as a potential morally permissible method for increasing COVID-19 vaccination uptake.

II. Introduction to Coercion and Historical Basis for Vaccine Mandates

The first place I want to start in addressing coercion is with a heavily contestable strategy leaders have employed for over a hundred years to increase vaccination uptake: vaccine mandates. Vaccine mandates are a form of public health outreach that have a proven history of decreasing the occurrence of infectious diseases. They are also responsible for heated debates

which polarize those who believe they are permissible and effective from those who see them as a coercive encroachment of state power. Vaccine mandates are a natural starting point for this section as Chapter 2 will focus heavily on compulsory vaccination as an ethical strategy to increase COVID-19 vaccination uptake. Along the way, I will introduce and analyze the considerations leaders ought to have when deciding whether one's individual right to liberty can be usurped by a legal mandate for vaccination. Since I have already determined that a liberty approach will not work, I want to understand *why* the courts and government have allowed vaccine mandates in the United States.

Before I address coercion and vaccine mandates relative to COVID-19, I will provide a historical overview of such mandates in the United States—and more importantly, explore the constitutional basis of mandatory vaccination. Understanding the history of vaccine mandates in the U.S. matters for my future focus on the normative arguments we can potentially rely on to justify their use. In 1905, the Supreme Court upheld the right of individual states to enact compulsory vaccination laws, considering the smallpox epidemic. This landmark case, *Jacobson v. Massachusetts*, 197 U.S. 11 (1905), asserted that an individual's civil and legal rights under the Fourteenth Amendment were not violated by a state's right to protect the health and safety of its people.[33] The Court's majority opinion included an acknowledgment of the tension there is between individual freedom and public health:

> The liberty secured by the Constitution of the United States does not import an absolute right in each person to be at all times, and in all circumstances, wholly freed from restraint, nor is it an element in such liberty that one person, or a minority of persons residing in any community and enjoying the benefits of its

[33] "Jacobson v. Massachusetts, 197 U.S. 11 (1905)."

> local government, should have power to dominate the majority when supported in their action by the authority of the State.
>
> It is within the police power of a State to enact a compulsory vaccination law, and it is for the legislature, and not for the courts, to determine in the first instance whether vaccination is or is not the best mode for the prevention of smallpox and the protection of the public health.[34]

Jacobson v. Massachusetts provided the legal framework that other mandates have since expanded upon, all abiding by the notion that an individual's liberty is not absolute, *and* the state can use its policing power to protect the health and safety of its citizenry.

Following *Jacobson*, in 1922 the Supreme Court confronted the constitutionality of school vaccination laws in *Zucht v. King*. In doing so, the Court found that the school districts of San Antonio, Texas could constitutionally exclude unvaccinated students from attending schools, asserting that an individual's right to education can be overridden by the public health imperative. The Court provided states with "broad discretion" to determine the means they should undertake to protect public health.[35]

Further expanding upon the state's authority to mandate vaccination of children can be seen in the 1944 case of *Prince v. Massachusetts*, which considered the doctrine of *parens patriae*. In *parens patriae*, the state can maintain authority over a child and their welfare, instead of rights of religion or rights of parenthood.[36] While this thesis does not contend with the ethics of methods to increase childhood vaccination uptake, much of the current literature on

[34] "Jacobson v. Massachusetts, 197 U.S. 11 (1905)," page 197 U.S. 12.
[35] "Zucht v. King, 260 U.S. 174 (1922)," page 260 U.S. 176.
[36] Malone and Hinman, "Vaccination Mandates," 273.

mandatory vaccination is about compelling children to get vaccines, and I mention it here because of the important constitutional frameworks we see introduced because of such laws.

Just because these pivotal court cases over the past 100 years have upheld a state's authority to mandate vaccination in many forms does not mean there has not since been public backlash at states exercising their authority since, or that the state is necessarily right in their authority. One notable controversy could be seen during the human papillomavirus (HPV) vaccine school-entry mandate and its surrounding legislation. In 2006, the Food and Drug Administration (FDA) licensed the HPV vaccine for the prevention of cervical cancer in women and anal and genital cancer in men. There was a public outcry—namely, by parents—immediately following its FDA approval over concerns that the state could not enact coercive control and power to infringe on parental autonomy. Public health researcher, James Colgrove, writes about the controversy and debate over the potential to mandate the HPV vaccine:

> Laws making vaccination compulsory raise unique ethical and policy issues. High levels of herd immunity protect all members of the community, including those who cannot receive vaccines because of medical contraindications. This protection provides a justification for compulsion. The availability of religious or philosophical exemptions mitigates concern about governmental intrusion on individual decision making. … Minors have a right to be protected against vaccine preventable illness, and society has an interest in safeguarding the welfare of children who may be harmed by the choices of their parents or guardians.[37]

Colgrove's examination of the controversy surrounding HPV vaccine mandates helps explains resistance to vaccine mandates more generally. As of April 2020, only four jurisdictions in the United States (including Rhode Island, Virginia, Washington, D.C., and Puerto Rico) mandate the HPV vaccine for school entry, a clear showing that opposition to vaccine mandates remains

[37] Colgrove, "The Ethics and Politics of Compulsory HPV Vaccination," 2390.

consistent and strong. While there are marked differences between HPV and other communicable diseases (mostly regarding how people contract the disease—because HPV is a sexually transmitted infection, many who oppose its vaccine mandate do so because it does not meet the bar for coercive policies since people generally consent to the risks of transmission) that may explain why there is not more support for HPV vaccine mandates, it provides an interesting case study as to the strong opposition such mandates face.

Another vaccine mandate that provides background to my examination of coercive vaccination policies for the COVID-19 vaccination regards the influenza vaccine for healthcare workers (HCWs). There has been ongoing advocacy within hospitals and healthcare practitioners' offices to make influenza immunization compulsory among HCWs. Since 1981 and to date, the CDC has recommended that HCWs receive their annual flu vaccine. There has historically been low influenza vaccine uptake among HCWs in the United States, which varies around and below 50% uptake.[38] Accordingly, there has been a longstanding discussion of how organizations and public entities can and should get their workers vaccinated. One study that explored the ethical and legal rationale for an influenza vaccine among HCWs finds empirical support for the efficacy of taking the vaccine:

> Health care organizations have enacted a variety of vaccination policies and interventions to guard against the known hazards of nosocomial influenza transmission, including longer patient stays, absenteeism, interruptions in health care delivery, and inpatient death. Two randomized controlled studies evaluating the effect of health care worker vaccination on nursing home residents found that health care worker influenza vaccination was associated with a 44% decrease in resident mortality. Furthermore, an algorithm evaluating the effect of health care worker influenza vaccination on patient outcomes predicted that if all health care

[38] Gruben, Siemieniuk, and McGeer, "Health Care Workers, Mandatory Influenza Vaccination Policies and the Law," 1076.

> workers in a facility were vaccinated, then approximately 60% of patient influenza infections could be prevented.[39]

Such empirical support for influenza immunization mandates among HCWs provides necessary context for the debate over using coercion to increase COVID-19 vaccination uptake. While many of the concerns for using coercion are similar, as will be evaluated in Chapter 2, so are many of the benefits.

At this point, I have delineated a background of vaccine hesitancy, the strategies leaders have available to address vaccine hesitancy, and the context of the historical vaccine mandate debate. Thus, I have concluded that a total liberty approach toward increasing vaccination uptake is neither permissible nor effective due to its potential to harm the collective population. Even after exploring the history behind constitutional support for vaccine mandates, we are still left with questions, however, about whether using coercion *is* justifiable. In Chapter 2, I will continue my discussion of coercion as a potentially permissible method to increase COVID-19 vaccination by analyzing the philosophical argument for using this strategy.

[39] Ottenberg et al., "Vaccinating Health Care Workers Against Influenza," 212. For more information and research related to mandatory influenza vaccinations for HCWs, refer to end-note citations 12-20 in Ottenberg et al.

Chapter 2

Introduction

I. Mill and Harm to Others

In this chapter, I will describe the closely connected principles of harm and coercion by examining the circumstances under which coercion is justified. In philosophical thought, there is a lack of consensus about all the conditions under which coercion might be justified. However, there *is* common agreement that harm permits the use of coercion. John Stuart Mill, in *On Liberty*, famously writes:

> The only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others.[40]

I defer to the classic liberal Mill to be especially authoritative here because of this thesis's focus on public health ethics and Mill's approach as a theorist of liberty. While these two foci—public health and liberty—may appear incongruent, by theorizing that liberty is an especially weighty concern *and* can also be limited when there is harm to others, Mill helps illuminate the idea that public health and liberty can work compatibly to reduce harm.

Mill is careful to distinguish between two ways to frame the considerations for justifying the use of coercion when harm is involved. The former way is through preventing harm to oneself. The latter is in preventing harm to others. Mill rejects the first and notably writes about what coercion cannot be used to do: control someone's behavior for their own good—for

[40] John Stuart Mill, *On Liberty*, 22.

example, to protect them from harming themselves physically or morally.[41] While I concede there is the potential for harm to oneself by contracting COVID-19, I am not going to rely on this type of harm in my argument. Later in this chapter, I will explore types of harm and explain why harm to oneself is not what matters morally. Thus, I will set aside the consideration of preventing harm to oneself to both simplify and narrow the focus of this thesis.

I will instead analyze the principle of harm to others. Mill advocates for external control, or coercion, to regulate individuals' actions when such behavior is of concern to the interests of others, stating that "If any one does an act hurtful to others, there is a *prima facie* case for punishing him, by law."[42] His understanding of coercion is broad: he imagines coercers using legitimate power on others besides prototypes of control such as force, violence, or threats.[43] Mill adds that disapprobation, or the state of being disapproved of in a moral sense, and stigma are also types of coercion that can be used to prevent harm to others. Later in this section, I will examine non-penal forms of coercion, including the types of social coercion to which Mill alludes. It is important to note that Mill believes that harm can be caused by inaction and is therefore potentially impermissible under the harm principle.[44] Understanding harm in this way will be very relevant to the case of non-vaccination, as later in this chapter, I will analyze why we can coerce someone to do something. I will take the stance that non-vaccination poses harm to others. As a result, I will argue that the liberal harm principle supports our examination of non-vaccination as possible grounds for justified, liberty-limiting action.

[41] John Stuart Mill, *On Liberty*, 22.
[42] John Stuart Mill, *On Liberty*, 24.
[43] Anderson, "Coercion."
[44] John Stuart Mill, *On Liberty*, 20.

a. Direct Harms

Before we begin to understand coercion—or a threat of a rights violation (namely, liberty)—we must look more closely at what constitutes harm to others. I want to distinguish between the issues of two types of harm: direct and indirect harm. Falling under the classification of direct harms is what is most associated with non-vaccination: I do not get vaccinated and contract and spread the disease to you, who, as a result, gets sick. This we can call the harm of exposure.

b. Indirect Harms

However, other harms can be just as damaging. I call these indirect harms. Possible indirect harms that can be caused by non-vaccination include harm to the medical system through unnecessary costs and usage of services, harm to the economy through loss of earnings, and harm to family and friends for not being able to fulfill duties.

One detrimental indirect harm is the harm captured by the public goods argument for vaccination. Herd immunity, the idea that when a large proportion of the population becomes immune to a disease, the spread of the disease will be mitigated by such immunity and protect those who are not vaccinated, is a public good. Similar in a sense to clear air and drinking water, herd immunity is a public good in that it is "non-excludable and non-rivalrous in consumption."[45] One issue public goods face is the harm to the good posed by free-riders. People are incentivized to free ride because they can benefit from the good without assuming their fair share of its cost. Another harm to public goods is the collective action problem that ecologist Garrett Hardin

[45] Giubilini, "Vaccination Ethics," 6.

coined in 1968, "The Tragedy of the Commons." [46] The tragedy of the commons is such that a public good is overused and lost because of collective overconsumption. Relevant to non-vaccination, this concept means that while one person's choice to remain unvaccinated will not affect the protection of the group offered by herd immunity, if many people act in that way, herd immunity will be weakened and eventually leave the community vulnerable to impending disease.[47,48] Therefore, I will navigate the remainder of this chapter under the assumption that non-vaccination poses harm to fulfilling the public good of herd immunity.

II. Non-Considerations

a. Paternalist Considerations

Before continuing in this thesis, I would like to briefly address and dismiss two additional arguments that appeal to justifying coercion against non-vaccination: paternalism and fairness grounds. Unsimilar to harm to others, paternalistic arguments are concerned with permitting coercion against harm to oneself. Philosophers Alberto Giubilini and Julian Savulescu found their argument in support of a paternalistic coercive vaccination policy as significantly analogous to seat belt use in cars. They believe in the same way we can justify limiting liberty by mandating seat belts, we should be able to justify vaccinations: to protect one from harm to themself.[49] Their analogy rests on seat belt mandates being the most suitable to compare "because we can think of seat belts as a metaphor for vaccination: a vaccine protecting individuals against an infectious disease is like a seat belt protecting individuals in car accidents, or, to push the metaphor a bit, like a seat belt against infectious diseases."[50] As will be concluded

[46] Hardin, "The Tragedy of the Commons," 1244.
[47] Hardin, "The Tragedy of the Commons," 1244.
[48] Colgrove, "Immunization and Ethics," 6.
[49] Giubilini and Savulescu, "Vaccination, Risks, and Freedom," 237.
[50] Giubilini and Savulescu, "Vaccination, Risks, and Freedom," 244.

through the remained of this thesis, the main issues I am concerned with are preserving liberty and preventing harm to *others*; therefore, my argument will not rely upon paternalistic grounds for preventing harm to oneself.

b. Fairness Considerations

One further type of argument to introduce before putting it aside in favor of harm to others is the fairness dilemma posed by non-vaccination. Giubilini more recently has sustained an argument for compulsory vaccination through an analogy to taxation. Deviating from harm to others' concerns, his analogy rests on an 'equitable principle,' which determines an individual's fair share of the efforts that are necessitated to prevent harm.[51] With taxation, it is fair that everyone fulfills their contribution to benefit the collective wellbeing by paying taxes, which Giubinili believes is independent of the impact of one individual action.[52] With vaccination, similarly, it is fair that everyone fulfills their contribution to the public good of herd immunity and the collective right against harm to others by getting vaccinated, independent of one person's impact. Giubilini's taxation analogy paraphrases the Aristotelian quote that the whole is greater than the sum of its parts. At its root, his argument is a Kantian argument veiled by his fairness concerns. I am much more concerned with harm to others than fairness in this non-vaccination case and other public health ones, as well. Thus, I am not entertaining this type of harm consideration as I continue through this chapter.

I will conclude in this chapter that the use of coercion is justifiable, in principle, in the case of the COVID-19 pandemic—due to the harm principle. I seek to understand the argument

[51] Giubilini, "An Argument for Compulsory Vaccination," 449.
[52] Giubilini, "An Argument for Compulsory Vaccination," 450.

for allowing coercive methods for the sake of protecting others from harm. I am concerned, as Mill was, with what methods, specifically coercive ones in nature, can be undertaken to prevent harm to others. I now want to consider the political philosophy of liberalism and its central tenet, the harm principle, and then the role that harm plays in the debate over using coercion to increase COVID-19 vaccination uptake.

The Harm Principle Argument

I. Feinberg's Justifications for Coercion

Within the philosophical movement of liberalism, the principal theme is that liberty is the utmost value to assert and protect. Liberals such as Joel Feinberg believe there is a presumptive case in favor of liberty.[53] To override this default and permit liberty-limiting restrictions, potential harm must be balanced against liberty to determine the application of the harm principle. To justify coercing someone, liberals draw on the harm principle: the idea that while one has a right to liberty, one does not have an unlimited right to liberty if their exercise of that right infringes upon the liberty of others. Thus, if one's actions unduly affect someone else, they may be subjected to liberty-limiting action.

In his four-volume *The Moral Limits of the Criminal Law*, Joel Feinberg provides a more modern conception of Mill's harm principle. Feinberg, like Mill, believes that liberty is the norm, and people should generally be left to make their own choices. However, there are certain exemptions to this belief where coercion is justified; furthermore, coercion *should* be used in these situations to rectify or prevent situations where one's action poses harm to others. Feinberg branches off from Mill's way of thinking about the harm principle as he argues that Mill in effect

[53] Feinberg, "General Introduction," *Harm to Others*, 7.

believed that "the harm principle is the *only* valid principle for determining legitimate invasions of liberty," but we would be better off conceiving that "the harm principle is *a* valid legislative principle (though not necessarily the *only one*)."[54] He retains his liberal predispositions as he believes the harm principle must be applied to relevant cases and even supplemented with other ethical frameworks to achieve, what he deems, moral adequacy.[55]

a. Harm as Being "Harmed"

Feinberg outlines such justifications for applying the harm principle in *Volume 1: Harm to Others*, where he distinguishes between three versions of harm to others. The first sense, which is less relevant for our vaccine case, is harm as anything that can be "harmed."[56] Feinberg provides the example of a vandal smashing the windows of a building. While the windows are not the focus of our indignance, those who own the building and must deal with the repercussions of this vandalism are the ones harmed, in a transferred sense. It is the building's owners who have suffered from the direct harm of the action.[57] This type of harm relates to the concept of harm to a system, i.e., the harm to the medical system through overconsumption of healthcare or to the economy through loss of earnings. We are less interested in this version of harm because the persons in the system are what deserve our primary attention, not the system itself.

b. Harm as Setting Back an Interest

[54] Feinberg, "General Introduction" *Harm to Others*, 9.
[55] Feinberg, "General Introduction," *Harm to Others*, 9.
[56] Feinberg, "Harms as Setbacks to Interest," *Harm to Others*, 2.
[57] Feinberg, "Harms as Setbacks to Interest," *Harm to Others*, 3.

Feinberg's second sense of harm to others is harm in the form of the "thwarting, setting back, or defeating of an interest."[58] An interest is anything that one has a stake in its well-being. Having a stake in something's well-being, such as a company and its stock, means that as the stock prospers, those who have an interest in it prosper as well, and vice versa in the case of the interest withering. People have the propensity to *invade* others' interests.[59] As Feinberg notes, to test whether one's interest has been harmed by another person is to see if the invasion, or the thwarting, setting back, or defeating of this interest, leaves it in a worse condition than if it had not been affected in the first place.

While we can see Feinberg's second sense of harm seeming appealing for the COVID-19 case, we can imagine scenarios that provide evidence for why this sense of harm is not adequate for understanding the harm principle. For instance, in the early stages of the pandemic, when vaccine appointments were limited and coveted spots were given out in order of importance of who most needed the vaccine, we can envision a situation where your 80-year-old grandparent or immunocompromised neighbor qualified before you to receive their inoculation. Would it be fair to say that your grandparent or neighbor invaded your interest in receiving the vaccine by getting theirs before you? Did their advancement in the "line" set back your own? While we can imagine this as "harm" to ourselves in some sense, it does not seem like the type of harm that the harm principle was created to protect against.

c. Harming as Wronging

[58] Feinberg, "Harms as Setbacks to Interest," *Harm to Others*, 3.
[59] Feinberg, "Harms as Setbacks to Interest," *Harm to Others*, 4.

Feinberg's third sense of harm is more appropriate for our understanding of the harm principle relative to non-vaccination. This version concerns harm in the strict and narrow sense. Feinberg contrasts "policies, actions, and omissions that harm a person without *wronging* him, with those that not only harm him but wrong him too."[60] (Refer back to the case of an immunocompromised neighbor noted earlier to understand the type of harm that does *not* include a wrong). In this third and narrow sense of harm, Feinberg conceives of one who suffers harm as a victim who has been wrongfully inflicted to *any* kind of unconsented-to harm to interest.[61] This sense of harm relates to why we are most concerned with non-vaccination. Feinberg constitutes harm as a "*wrongfully* set-back interest."[62] Feinberg's third sense of harm is where he most principally distinguishes between harming as wronging and the importance of there being a reckless or negligent intent to harm. That is, the harm that can justify coercion occurs when person "*A*'s act of omission has as its intention to produce an adverse effect on *B*'s interests, or is negligent or reckless in respect to the risk of such an effect."[63] This version of harm also allows us to talk about persons as the recipients of harm, as they, but not systems, can be wronged.

Analyzing wrongdoing to others in such a sense is pertinent for helping to answer our question of whether there are permissible actions to take against COVID-19 non-vaccination. As such, Feinberg believes that a person's most important interests, shared universally among all others, are those:

> … in the continuance for a foreseeable interval of one's life, and the interests in one's own physical health and vigor, the integrity and normal functioning of one's body, the absence of absorbing pain and suffering

[60] Feinberg, "Harming as Wronging," *Harm to Others*, 3.
[61] Feinberg, "Harming as Wronging," *Harm to Others*, 12.
[62] Feinberg, "Harming as Wronging," *Harm to Others*, 1.
[63] Feinberg, "Harming as Wronging," *Harm to Others*, 3.

> or grotesque disfigurement, minimal intellectual acuity, emotional stability, the absence of groundless anxieties and resentments, the capacity to engage normally in social intercourse and to enjoy and maintain friendships, at least minimal income and financial security, a tolerable social and physical environment, and a certain amount of freedom from interference and coercion.[64]

One's ability to retain a certain amount of freedom from interference and coercion hinges on their responsibility to not invade another's interest. Given this examination of wrongfully inflicted harm to one's interest, we can pose the main question of this section: do unvaccinated people recklessly or negligently wrong others by not receiving their COVID vaccine? To ethically sanction liberty-limiting action, must we assert that non-vaccination is a reckless or negligent invasion of others' welfare interests and, therefore, that they are wrongfully harmed by vaccine refusal?[65]

Application of the Harm Principle

In many cases, the application of the harm principle is relatively straightforward. We can imagine a situation in which one person commits murder, which is malum prohibitum.[66] According to the harm principle, and our intuition, this wrong or evil action against the second person is directly harmful to them. It sets back their interests—namely, their interests in being alive—in a way that wrongfully harms them. The person who committed the wrong should be held responsible for infringing on the rights of another. Thus, the state is justified in limiting

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[64] Feinberg, "Harms as Setbacks to Interest," *Harm to Others*, 7.

[65] I defer in this section to Feinberg's conceptions of harming for a few reasons: firstly, his writings on harm work to bolster and provide further support for Mill's harm principle, of which I believe we should accept and apply to the case of non-vaccination; and secondly, Feinberg is a strong fit for what I am interested in analyzing, appeals to interests such as health interests and how liberty is conceived therein. While I want to acknowledge other notable conceptions of harms, such as Ben Bradley's where he rejects the harm principle [see Bradley Ben, "Doing Away with Harm"], no other versions of harm are as fitting as Feinberg's expansion of Mill's classic, liberal harm principle.

[66] Thus, murder is prohibited because it is fundamentally a wrong or evil in itself.

their liberty, by imposing legal sanctions on their freedom and agency. In this uncomplicated case, the action in question inflicted harm to another and set back their interests. More than this, the taking of another's life warrants the most extreme forms of coercion due to the severity and intentionality of the action.

Other cases are more complicated. How, for instance, does the harm principle apply to a debate over using coercion to increase COVID-19 vaccination? I will address both philosophical and epidemiological considerations before turning to a more recent account of the harm principle. As I briefly discussed in Chapter 1 in my section about the public good of public health, according to Rawls and other contemporary philosophers, the principle of fairness may oblige us to support "'discretionary public goods' (goods that are desirable but not indispensable).[67] George Klosko—a theorist of contemporary political theory—argues for a political obligation to support non-excludable public goods, such as public health:

> In addition to being non-excludable, the benefits provided by cooperative [state] enterprises must be:
>
> 1 worth their costs to (typical) members of the scheme;
>
> 2 presumptively beneficial;
>
> 3 fairly distributed, along with their accompanying burdens.[68]

If A may harm by not fulfilling their obligation to the cooperative state, it follows that B may be harmed by A's failure to contribute to non-excludable public goods. I believe this conception of wrongful harm based on public goods considerations strengthens my argument that the state is potentially justifiable in preventing harm to others in the case of the act of non-vaccination.

[67] Klosko, "The Obligation to Contribute to Discretionary Public Goods," 196.
[68] Klosko, "The Obligation to Contribute to Discretionary Public Goods," 198.

Epidemiological considerations in applying the harm principle to non-vaccination rest on herd immunity thresholds. When there is a public health question of containing disease, science officials often believe the herd immunity threshold, if attainable, should be the collective goal toward which we strive. Herd immunity is a salient goal, because the higher the percentage of people without immunity, the higher the disease's incidence rate will be. CDC, WHO, and other leading health organizations advocate for achieving this threshold not through disease transmission but through immunization, to prevent the total number of unnecessary cases and deaths. Regardless, herd immunity can be hypothetically achieved through both vaccination and natural infection. One of the stated goals of herd immunity is to reach as much of the population as possible to protect vulnerable groups who cannot become immunized—for example, people who have health conditions that prohibit them from taking the vaccine. The goal of reaching the herd immunity threshold is to make it as close to impossible for a disease to travel through community spread.

While the percentage of people who need to be immune to achieve herd immunity fluctuates with each disease and with each geographic region, there is no telling at the time I am writing this what proportion of the population must be immune to COVID-19 to activate herd immunity. Current discourse has even indicated that we may never reach herd immunity sufficient to stop the transmission of COVID-19 due to waning immunity among those who have been vaccinated and those who have survived an active infection.[69] While we may not know the herd immunity threshold necessary for COVID-19, we can assume the figure is like past diseases and continue with vaccination efforts accordingly. Past major diseases, including measles and

[69] Healy, "CDC Shifts Pandemic Goals Away from Reaching Herd Immunity."

polio, required that the United States population reach an immunized threshold of over 95 percent and 80 percent, respectively, for herd immunity to work.

I. Flanigan's Account of Harm and Coercion

To assess the application of the harm principle developed by philosophers Mill and Feinberg to my case of COVID-19, I will draw on the account put forward by fellow liberal Jessica Flanigan in "A Defense of Compulsory Vaccination." Flanigan argues that the modern science of vaccination has revolutionized our society and its collective health by making us less prone to fall ill and perish from contracting communicable diseases. Therefore, because vaccination keeps us safe and our interests in being alive protected, vaccine refusal poses unacceptable harm. As a result of the threat posed to innocent people by non-vaccination, Flanigan argues that it is permissible and justified to take coercive measures to mandate vaccination.

Her central argument rests on an analogy. She argues that vaccine refusal is morally like random gunfire, in that both actions are reckless.[70] Just as we are justified in prohibiting random gunfire, we are justified in prohibiting non-vaccination or requiring vaccination. However, Flanigan is committed to the indispensable value of liberty and limits the permissible scope of mandatory vaccination to preserve that value; she lays out four necessary conditions that make compulsory vaccination justified:

1. The vaccine in question works against a contagious illness, as opposed to a non-contagious illness;

[70] Flanigan, "A Defense of Compulsory Vaccination," 5.

2. People must not consent to the risks of transmission;

3. The vaccine must be effective at limiting the risks of contagion and cannot be ineffective or outdated;

4. And, vaccination must not limit one's self-defense in the name of public health.[71]

I will assume these four conditions are acceptable and, when properly satisfied, sufficient to justify coercion. To determine whether this assumption holds, I will analyze each condition with consideration of the COVID-19 vaccine case.

For Condition 1 to be satisfied, Flanigan believes that the vaccine in question must prevent a contagious illness. There is overwhelming evidence that COVID-19 is a contagious virus. Unlike the tetanus vaccine, for example, which Flanigan claims fails to satisfy this condition because tetanus and other such diseases are non-communicable, the COVID-19 vaccine prevents COVID-19, a highly contagious illness. The virus we are concerned with spreads from the mouth or nose of an infected person when they breeze, cough, speak, or engage in any activity that allows for small, respiratory droplets to escape. COVID-19 has a reproductive number, R0, of 2-3, as of October 2021, indicating that for every one case, there are 2-3 secondary cases that occur as a result.[72] Any disease with an R0 over 1 means the disease in question will reproduce and continue to have further outbreaks.[73] When comparing COVID-19 to other emerging viral diseases of the past 20 years, including SARS and Ebola, due to the dangerous combination of having a high reproductive number, an influx of superspreading events (such as mass gatherings), and a population that had no immunological protection against

[71] Flanigan, "A Defense of Compulsory Vaccination," 14.
[72] Wilder-Smith, "COVID-19 in Comparison with Other Emerging Viral Diseases," 2.
[73] Wilder-Smith, "COVID-19 in Comparison with Other Emerging Viral Diseases," 2.

the disease, COVID-19 is the worst pandemic the world has seen this century, associated with the highest number of global cases and deaths.[74] By virtue of the incredibly high level of contagion, it follows that COVID-19 satisfies Flanigan's first condition to justify compulsory vaccination.

Flanigan argues in Condition 2 that it is easier to justify mandatory vaccination policies for diseases where those exposed to the illness are not liable to the risks of transmission than for diseases where the victim incurs such risks.[75] In explaining this condition, Flanigan compares measles to sexually transmitted infections (STIs). Those who suffer from a case of measles are not liable to the risks of transmission because they could not avoid contracting the airborne disease; however, those who contract an STI are responsible because they consented to have sex which means consenting to the risks associated with such an action. Of course, some people are more liable to the risks of contracting an STI than others. For example, one who consents to unprotected sex or having sex without confirming a negative disease status from their partner makes them more responsible than others for the risks they are incurring. Regardless of the questions about risk assumption, however, Flanigan's overall argument still holds. She claims that compulsory vaccination can be justified only in cases where parties held accountable to such a mandate did not consent to the risks of disease transmission.

To satisfy Condition 2, we must analyze our disease-in-question, COVID-19, to show that those who contract and transmit the disease are not liable to the risks. We can accept this condition because COVID-19 is extremely contagious and disseminated airborne via respiratory droplets, and it follows that the virus infects a larger number of people than those who

[74] Wilder-Smith, "COVID-19 in Comparison with Other Emerging Viral Diseases," 8.
[75] Flanigan, "A Defense of Compulsory Vaccination," 14.

voluntarily consent to its risks. To mirror Flanigan's antithetic STI example, the people who consent to the risks of COVID-19 are those who neglect public health preventative behaviors, such as social distancing, masking, et cetera. Those who have been safe during the pandemic should not face the consequences of being infected if they have complied with preventative actions.

In Condition 3, Flanigan holds that mandated vaccination requirements are justified if and only if the vaccine effectively limits the risks of contagion.[76] There is evidence for believing that the COVID-19 vaccine is effective at limiting the risks of contagion. Guidelines for the Food and Drug Administration (FDA) and CDC, as of October 2021, recommend eligible people receive one of the three COVID-19 authorized or approved vaccines: the two 2-dose mRNA vaccines from Moderna and Pfizer-BioNTech, and the 1-dose viral vector vaccine from Johnson & Johnson. A recent CDC study found, when examining vaccine effectiveness (VE) of the three vaccines in preventing hospitalization due to COVID-19, that Moderna was 93% effective, Pfizer-BioNTech was 88% effective, and Johnson and Johnson was 71% effective.[77] It is not contentious to say that these statistics are highly favorable for the evidence-in-question; thus, the COVID-19 vaccine can meet the standards to satisfy Condition 3.

The fourth and last condition is provisional on the basis that peoples' rights to self-defense should not be violated in service of a mandatory vaccination requirement. Thus, Flanigan asserts that one's "rights of self-defense can outweigh others' rights against the risks of contagious transmission."[78] Condition 4 must be satisfied on the basis that no one's right to

[76] Flanigan, "A Defense of Compulsory Vaccination," 15.
[77] Self, "Comparative Effectiveness of Moderna, Pfizer-BioNTech, and Janssen (Johnson & Johnson) Vaccines in Preventing COVID-19 Hospitalizations Among Adults Without Immunocompromising Conditions — United States, March–August 2021."
[78] Flanigan, "A Defense of Compulsory Vaccination," 15.

protect their health is jeopardized because of taking the COVID-19 vaccine. We must consider what constitutes self-defense in this case. Flanigan thinks self-defense means refusing a vaccine because one is severely allergic to it or a component within it.[79] People who have applicable medical concerns that preclude them from taking the COVID-19 vaccine will not be required by policy or law to receive it, similar as is the case with other vaccines. As a result, Condition 4 seems met.

Initially, all of Flanigan's conditions appear to look met through the application of the COVID-19 vaccine. But I turn now to consider possible objections to this assumption, as well as my responses. Along the way, I will examine the model case of the COVID-19 vaccine.

Complications and The Model Case

I. Objections to Flanigan's Conditions

The most outstanding objections to Flanigan's conditions question the implications of her conditions regarding the COVID-19 pandemic and currently available vaccines. To deal with these objections, I will systematically sort through her four conditions to determine whether they can be defended or critiqued considering the objections. Concerning Condition 1 on permissible coercive action against non-vaccination, the vaccine in question must work against a contagious illness, as opposed to a non-contagious illness. Evidentiary data have shown that COVID-19 is a contagious disease; however, one possible objection is that we have face masks and other methods that are less restrictive than the coercive action of vaccination that we can use to mitigate our exposure to the disease. Thus, vaccination may not be necessary to resort to if there

[79] Flanigan, "A Defense of Compulsory Vaccination," 15.

are other alternatives that work against preventing the disease spread. This objection, if credible, poses issues by raising the threshold for us to accept coercive action against non-vaccination.

In rejecting this objection, I claim that we misconstrue the effectiveness of face masks or other such preventative measures by relying solely on their weak effectiveness instead of promoting vaccination uptake. While leading health organizations recommend that individuals who are susceptible to contracting COVID-19 don face masks while in public spaces, there are issues with claiming masks and other personal protective equipment are as effective as vaccination at preventing the transmission of the disease. While data is continuously evolving regarding the efficacy of mask-wearing, there is not substantial enough literature that warrants replacing vaccination—a credible form of mitigating disease transmission—with such methods. Uncontestably, mask-wearing does not work as well as vaccination. Even if it did work as effectively at preventing the spread of COVID-19, to obtain their full effects, we would be compelled to require everyone to wear them. To require mask-wearing, we would need to justify such a practice just like we justify vaccination. Thus, requiring mask-wearing is coercive and impermissible. COVID-19 is sufficiently contagious enough as a disease to apparently make the case to justify coercion against non-vaccination, a tenable solution to preventing disease spread.

Concerning Flanigan's Condition 2, coercion can be justified against non-vaccination when people do not consent to the risks of transmission. The issue remains, however, that we also must consider this condition relative to specific populations, such as those who are immunocompromised and those with other health conditions (like severe allergies) that preclude them from receiving the vaccine. It seems reasonable to argue that because they cannot get vaccinated, and because they understand the inherent risks of not getting vaccinated and still participating in society in public spaces (e.g., grocery stores, schools, office buildings, et cetera),

these groups are liable to the risks of COVID-19; however, this argument against mandatory vaccination is not valid. While these specific groups cannot receive the direct benefits that come with being vaccinated, they rely on most of the population getting inoculated so that they can continue to live healthy lives considering their implicit consent to the risks of COVID-19.

This begs the latent objection that the disease is avoidable in principle. For instance, one might argue that those who cannot or do not want to be vaccinated could self-isolate in perpetuity. That objection is, firstly, not practical and, secondly, not attainable because we value liberty and living a good life. Asking someone to isolate from society would not be acceptably required in a theory that upholds the utmost value of liberty. People have a right to live objectively normal lives (i.e., engage as social and productive members of society). By rejecting this consideration, our argument for accepting Condition 2 and justifying coercive power against COVID-19 vaccination is reinforced. If we cannot control the disease with vaccines, we lose other liberties, such as the ability to cherish the values of a good life and liberty in the way we live.

Flanigan contends in Condition 3 that the vaccine must be effective at limiting the risks of contagion, and it cannot be ineffective or outdated. At the time of the writing of this thesis, it can be determined that the COVID-19 vaccine, while highly effective, does not fully prevent the spread of the virus. Considering waning vaccine effectiveness and public health restrictions being lifted, we have seen an influx of breakthrough cases. Breakthrough cases occur among fully vaccinated people, where a subset of the vaccinated population can contract and transmit high levels of viral load. The lower the vaccination rate, the higher the breakthrough rate will be for both those who consent to the risks of the disease and those who don't. Therefore, as breakthrough cases come about, more and more people can be considered not liable for the risks

of transmissions as they have taken the most crucial precaution against virus transmission: vaccination.

While the vaccine still offers strong protection against the worst outcomes from contracting the virus (e.g., hospitalization or death), there is legitimate concern about waning effectiveness against infection. A New York Times interactive mapping article published in November of 2021 examined the main vaccines circulating in the United States and the levels of protection offered by each over time. The researchers found that while the on-market vaccines are still working as intended, by being at least 50 percent effective at preventing infection according to multiple studies, public health officials are concerned with effectiveness declining over time.[80] Namely, the Pfizer-BioNTech vaccine is 90 percent effective at preventing symptomatic illness two weeks following inoculation but sees a major drop to 70 percent effectiveness after just five months.[81] Moderna and Johnson & Johnson followed similar trends. Since the publication of the NYT article, all three vaccines have been approved for booster shots to provide longer-lasting immunity.

Due to decreasing effectiveness over time with three major vaccines on the market in the United States, we are due to see more cases overall, among unvaccinated and vaccinated individuals. The question then remains: if the COVID-19 vaccine is not wholly effective at stopping the spread of the virus, can it still satisfy the conditions to warrant the type of coercion offered by Flanigan? Can we ethically permit coercive methods to increase vaccination rates if

[80] Walker and Holder, "What We Know So Far About Waning Vaccine Effectiveness."
[81] Walker and Holder, "What We Know So Far About Waning Vaccine Effectiveness."

the vaccine is effective at preventing hospitalization and death but not fully effective at preventing infection?

In seeking an answer to these interrogations, it is relevant to compare the COVID-19 vaccines to other vaccines that are commonly considered effective. Vaccine development in the twentieth and twenty-first centuries has moved at warp speed. To date, we have engineered vaccines to fight against a range of infectious agents. Hotly debated in scientific discourse early in vaccine development during the COVID-19 pandemic was the use of mRNA vaccines. Both industry leaders Moderna and Pfizer-BioNTech unveiled their mRNA vaccines to the public, drawing concern over the not as commonly understood vaccine type. However, to find the best comparison of COVID-19 vaccines, we must turn to the recent, and first-ever, messenger RNA (mRNA) vaccines used against H10N8 and H7N9 influenza viruses of pandemic potential from 2015.[82] Phase 1 studies found the 2-dose mRNA vaccine elicited robust immune responses and high antibody persistence in participants against influenza viruses—demonstrating mRNA as a highly effective form of vaccination.[83] As COVID-19 mRNA has efficacy rates well above 50%, to further emphasize the point about its relatively high efficacy, each year the influenza vaccine is no more protective than 60% effective, and some years as low as 10% protective.[84] Relative to the influenza vaccine, the case to mandate the COVID-19 vaccine looks more met according to Flanigan's Condition 3.

As to Condition 4, vaccination must not limit one's right to self-defense in the name of public health. The perceived safety of the COVID-19 vaccine has been critically linked to one's

[82] Feldman et al., "MRNA Vaccines against H10N8 and H7N9 Influenza Viruses of Pandemic Potential Are Immunogenic and Well Tolerated in Healthy Adults in Phase 1 Randomized Clinical Trials," 3326.
[83] Feldman et al., "MRNA Vaccines against H10N8 and H7N9 Influenza Viruses of Pandemic Potential Are Immunogenic and Well Tolerated in Healthy Adults in Phase 1 Randomized Clinical Trials," 3332.
[84] Cohen, "Why Is the Flu Vaccine so Mediocre?," 1222.

intentions to receive the vaccine since the beginning of its distribution.[85] Flanigan narrowly lists an allergic reaction to a vaccine or a component of a vaccine as grounds on which one can assert their right to self-defense against taking a vaccine. But an objection is why this consideration does not include thinking about other health complications that can arise from receiving the vaccine and possibly allow for one to protect themself.

While prior research generally confirms that those who have experienced side effects from the COVID-19 have only had slight reactions (not unsimilar to common reactions to other vaccines—pain, soreness, and swelling in the injection site, and low fever, fatigue, headaches, et cetera throughout the rest of the body), some research has indicated otherwise. While there are not widespread reports of adverse effects caused by the vaccine, cases of myocarditis and blood clotting have been reported as extremely rare reactions. Two studies published in October 2021 released information about COVID-19 vaccine recipients reporting experiences of myocarditis, or inflammation of the heart muscle, during their adverse events monitoring period following inoculation. In the first report, of more than 5 million Israeli people who had received both doses of the Pfizer-BioNTech COVID-19 vaccine, 136 developed myocarditis.[86] In the second report, also sampled from an Israeli population, from over 2.5 million vaccinated people (who also received Pfizer-BioNTech), 54 cases of myocarditis were identified.[87] Other data that seemingly confused the issue of COVID-19 vaccine safety suggested that the vaccine had possible connections to developing blood clots, particularly in young women. In April 2021, the CDC and

[85] Soares et al., "Factors Associated with COVID-19 Vaccine Hesitancy," 2.
[86] Mevorach et al., "Myocarditis after BNT162b2 MRNA Vaccine against Covid-19 in Israel," 3.
[87] Witberg et al., "Myocarditis after Covid-19 Vaccination in a Large Health Care Organization," 3.

FDA temporarily restricted distribution of the J&J vaccine in the United States after 6 suspected cases of blood clotting were detected among approximately 7 million vaccine recipients.[88]

While these studies suggest the general, widespread safety of the COVID-19 vaccines, some vaccine-hesitant people may still contest the claim that the benefits of the vaccine outweigh the risks. In sum:

> When the prevalence of a vaccine-preventable disease is high, the benefit to the individual from undergoing vaccination is greatest. As disease prevalence declines, however, the benefits of undergoing vaccination accrue primarily to society as a whole in the form of reduced disease prevalence.[89]

Given these considerations, one who receives the vaccine must weigh the potential harms they could suffer from contracting the virus with an acknowledgment that the effectiveness of the vaccine is not perfect *and* there are potential risks they could assume from getting the vaccine.

II. Model Case for Coercion

The complicated reality of COVID-19 suggests that we should think about a hypothetical case in which there was a COVID-19 vaccine that *perfectly* meets Flanigan's conditions. Flanigan's Condition 1 would be satisfied because, in this theoretical situation, we are dealing with a virus that has maximal contagiousness and is always deadly. Condition 2 would be met because no one has control over whether they contract the virus or not. We would satisfy Condition 3 in this model case because the vaccine we have is 100 percent effective at limiting the spread of the disease. In conclusion, Condition 4 is satisfied because the vaccine has zero side effects and does not pose any risk to those who take it.

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[88] Mahase, "Covid-19," 1.
[89] Colgrove, "Immunization and Ethics," 2.

In this model case, all four of the principles are unconditionally satisfied, and liberty-limiting action against someone who refuses to get vaccinated is justifiable. In such circumstances, we might think that the most extreme forms of coercion are justified—perhaps even to the point of tying an unvaccinated person up, dragging them to a vaccination clinic, and forcibly inoculating them. Maybe, it is even possible to imagine holding a gun to every unvaccinated person's head to coerce them to receive their vaccine—the paradigmatic case of coercion. Giubilini writes about how we can rank possible vaccination policies in terms of restrictiveness. He says:

> [Vaccination policies] go from mere information campaigns to outright compulsion or even forced vaccination. Alternatives within this range include nudging policies (e.g. opt-out vaccination in schools), incentives and certain penalties for non-vaccination (e.g. not allowing non-vaccinated children in school, such as in the USA, or withdrawing certain state benefits from families who do not vaccinate their children, such as in Australia).[90]

In our model case, where all of Flanigan's conditions are satisfied, I argue permitting the most vigorous forms of coercion to increase vaccination uptake is justifiable.

III. Objection to Flanigan's Analogy

One foreseeable issue, however, is the gap between the real situation and the ideal one. As ideal as this model case is, our real-world situation does not warrant such vigorous methods of coercion. Before responding to this issue, I move to introduce one additional objection, which is to the analogy on which Flanigan's argument relies. Flanigan argues that an unvaccinated person being in public is reckless in a similar manner to someone shooting a gun randomly into

[90] Giubilini, "Vaccination Ethics," 7-8.

the air.[91] While her analogy does not undermine the argument in support of coercive vaccination policies, it very well may diminish it for two reasons. First, Flanigan's analogy is incongruent in the sense that with random gunfire, the state is justified in coercing someone not to do something (i.e., to not randomly shoot a gun) while in non-vaccination, they coerce someone to do something (i.e., to get vaccinated). As Mill states, and as touched on earlier, we are justified to use coercion against harm to others to make someone do something, as well as to make someone not do something. To better understand the permissibility of using coercion against non-vaccination, however, a more fitting analogy would involve coercing someone to do something.

Secondly, Flanigan's analogy is flawed because she misapplies the standards of culpability. Recklessness means someone consciously disregarded another's well-being and engaged in behavior that they know is dangerous and has the propensity to injure that person. In our case of non-vaccination, it is not quite fitting that any unvaccinated person is reckless. A reckless person is more appropriately understood as an unvaccinated person contracting COVID-19 and going shopping at their local grocery store considering their positive diagnosis, fully aware of the harm they pose to others. That is recklessness. As such, the acts of not getting vaccinated, testing positive for the disease, deliberately disregarding public health guidelines, and exposing innocent bystanders to the risk of transmission makes their behavior reckless and renders them culpable in a similar sense as someone who randomly shoots a gun into the air is culpable when their bullet injures someone.

In contrast, the behavior of someone who does not get vaccinated is recognized as negligence. In Flanigan's argument, the unvaccinated person is more apt to be culpable for

[91] Flanigan, "A Defense of Compulsory Vaccination," 8.

negligence. Negligence is when one should have been aware of a substantial or unjustifiable risk, but they are not. In the case of non-vaccination, an unvaccinated person is negligent because they do not understand the harm they pose—but they should. According to scholastic theologian St. Thomas Aquinas, and more recently elaborated on by American philosopher Michele Moody-Adams, we can say those afflicted by this form of negligence suffer from affected ignorance. Moody-Adams comments, "Affected ignorance—choosing not to know what one can and should know—is a complex phenomenon, but sometimes it simply involves refusing to consider whether some practice in which one participates might be wrong."[92] I will briefly mention that in this situation we can imagine a person either deciding not to get vaccinated or simply not getting around to it. However, there should be no distinction in a finding of negligence between these two types of inaction, or these two examples of ignorance. The innate difference between these two forms of non-vaccination seems to be between deliberate inaction and apathetic inaction, but in the case of non-vaccination, both forms of inaction can be just as harmful to innocent bystanders.

Intention considerably matters for permissibility. Recklessness involves a conscious disregard for another's wellbeing—and an *intention* to act in a way that the person responsible knows is dangerous. Negligence, meanwhile, is one's *negligence*—or carelessness—to understand the harm one poses. Because recklessness is a higher level of culpability (in part because it involves intention), the state can be more coercive in protecting against it. Negligence, however, shows that the state is permissible in acting to prevent it. But negligence also lowers the level of coercion that can be justified. In this case, non-vaccination is not reckless but

[92] Aquinas, *Summa Theologiae*, 1-2.6, 8, cited in Moody-Adams, "Culture, Responsibility, and Affected Ignorance," 296.

negligent. If Flanigan's conditions are not fully met (but they still meet a threshold), we might think that coercion is justified but just at a lower level.

In light of these objections, that our actual COVID-19 vaccine is not like one in the ideal case for coercion and that non-vaccination is more suitable for a culpability of negligence and not recklessness, I still conclude that Flanigan's four conditions in favor of permitting liberty-limiting action are met. For the sake of my argument, it is beside the point that there is no complete satisfaction of the criteria, as what I am interested in arguing for is a threshold to be met. The threshold I am using is analogous to the United States court of law and standards needed to satisfy the burden of proof, therein. There are three common levels that we deem the standards of proof, in order of the lowest burden, respectively: preponderance of evidence, clear and convincing evidence, and beyond a reasonable doubt.

As it applies to considering the threshold Flanigan's conditions need to meet to justify coercion, we must be prudent but not extortionate. Public health is not compatible with the strictest burden, beyond a reasonable doubt. Science does not work with such a standard, either. I maintain that the threshold we should use is a clear and convincing standard. There must be a high and substantial probability that each of Flanigan's conditions is satisfied, for coercion to be permissible. While the threshold may not be met to legislate extreme forms of coercion to combat vaccine hesitancy, we can still conclude that something in place of the most vigorous types of coercion is justifiable. The evidence we have discussed in this chapter is clear and convincing: the vaccines are effective and there are no unreasonable side effects. We still meet a threshold that COVID-19 is eminent and contagious, it is involuntary enough for people to contract the virus, we have a highly effective vaccine to combat its spread, and getting vaccinated poses diminutive risks to those who take it.

Therefore, our threshold to justify lower levels of coercion against the negligent act of non-vaccination may be met. Some coercion is justifiable in principle to combat non-vaccination.

In the next chapter, however, I will prompt and expound on the argument that while justifiable in principle, leaders in the public health industry should not turn to using coercive methods to increase vaccination uptake for two-fold reasons. As I will explain in the following chapter, firstly, coercion is not the least restrictive method officials can use to accomplish their mission of increasing vaccination rates. Secondly, coercion negates a foremost goal of public health, which is to engender and sustain trust among communities to invoke collective action.

Chapter 3

Introduction

In the previous chapter, I laid out the normative reasons that justify leaders using lower levels of coercion to combat the negligent act of non-vaccination. In summation, my argument was based on applying Mill and Feinberg's harm principle to determine that unvaccinated people pose wrongful harm to others. To address these harmful actions, we must determine what liberty-limiting actions, if any, are permissible for leaders in healthcare to take. I first eliminated a total liberty approach—which would allow people unadulterated freedom to choose whether they want to get vaccinated—because this method is both ineffective and, more importantly, morally impermissible as it causes a surge of unnecessary cases and deaths due to the virus, which results in great collective harm. Afterward, I moved to evaluate coercion as a possible liberty-limiting method to combat non-vaccination. Through discussing the conditions to permit coercion put forth by Flanigan in her defense of mandatory vaccination, I concluded that the threshold has been narrowly met and coercion is justifiable, in principle.

However, at the end of the last chapter, I significantly qualified the implications of this conclusion by suggesting that even if they are justifiable in principle, there may be an argument that coercive methods should not be used to increase COVID-19 vaccination uptake. The beginning of this chapter will defend the claim that coercion should not be used in the application of increasing vaccination uptake. My argument at the beginning of this section is as follows and based on two arguments: firstly, coercion is not the least restrictive method, and ethically speaking we should always seek to use the method that limits peoples' liberty the least.

Secondly, coercion erodes trust—a paramount goal in healthcare—in public health efforts among our key demographic group of those who are of a lower SES class.

The Argument Against Coercion

Philosophers agree that there must be limits to coercion. As I relied upon in the preceding chapter, the harm principle is one such limit philosophers have imposed on using coercion. Mill and Feinberg argue in effect that coercion can be used to prevent harm to others. Just how much coercion is permissible, however, is up for interpretation, as it depends on the context and the argument. As I have concluded to this point, vaccine hesitancy opens the door to use coercion to address the harms it creates. Flanigan's liberal account further justifies the use of coercion to prevent the harms of non-vaccination.

We have assumed to this point that there is an upper-bound range of scenarios that answers the question of how much coercion is justified. Because we are not in the model case that I laid out in Chapter 2, we cannot use extreme methods of coercion to increase vaccination uptake. As a reminder, in this theoretical case suppose we would be permitted to impose extreme forms of coercion because we would be dealing with a virus that was extremely deadly and would have a vaccine that was highly effective and poses no risks to those who take it. Thus, in our current, real situation, the most that is justifiable is a mandate, or a similar lower form of coercion.

I. The Least Restrictive Alternative Principle

While it is justifiable, in principle, to use coercion to address vaccine hesitancy, the least restrictive alternative principle is important to consider whether we should even resort to coercion in the first place. The principle requires agents, when they have a choice between

actions that promote different ends, to choose the action that is least restrictive, or limits the liberty of the action's target the least. In other words, coercive means should only be used that are necessary and proportional to the harm they are attempting to prevent.

The least restrictive alternative saw considerable use during the mid-1950s in the United States, at the height of the deinstitutionalization movement regarding psychiatric health. In that context, the least restrictive alternative was to treat those with severe and persistent mental illnesses in a non-hospital setting, as opposed to an institutionalized environment. While my case of vaccination uptake does not specifically appeal to getting non-autonomous agents (i.e., those with debilitating mental illnesses) vaccinated, I include the context of the deinstitutionalization movement to assume the point that if the least restrictive alternative applies to weakly autonomous or temporarily non-autonomous people, it can apply to my case of fully autonomous agents. Thus, we should rely on this principle to inform our discussion of whether coercion is the necessary—or, most permissible—method to increase COVID-19 vaccination uptake.

Public health policy involves using legal action, instituting regulations, and utilizing social institutions to change the behavior of individuals and groups. While such action can be effective to further the goals of public health, institutionalized behavior change has the potential to—in certain scenarios—limit the liberty of those it intends to affect. In the case of public health ethics, governments and agents are ethically obligated to choose an action that least restricts their targets' liberties while still reaching goals for the collective good, as in promoting health on a public and broad scale. (I have already assumed liberty is the primary moral constraint, only overridden by great harm to others.) Childress et al. write:

> Public health agents should seek to minimize the infringement of general moral considerations. For instance, when a policy infringes autonomy, public health agents should seek the least restrictive alternative

> … The justificatory condition of least infringement could plausibly be interpreted as a corollary of necessity—for instance, a proposed coercive measure must be necessary in degree as well as in kind.[93]

"In degree" means the restrictiveness of the coercion used and "in kind" refers to the type of coercion used. Leaders have a duty to encroach as little as possible on liberty if there are less restrictive alternatives and if coercive action is not necessary.

One example of appealing to the least restrictive alternative and necessity principles is Franklin Miller in his 2021 article "Liberty and the Protection of Society During a Pandemic," which revisits Mill's harm principle and applies it relative to the COVID-19 pandemic. Miller considers liberty-limiting tenets with special consideration to the context of the coronavirus pandemic. Specifically, he argues that public health interventions in response to the pandemic, such as mask mandates and potentially mandatory vaccination, are ethically permissible considering the harm principle. In a society rooted in liberty, Miller defends Mill's harm principle in its application to the pandemic:

> Central to the ethical thought of John Stuart Mill was individuality—the self—development and cultivation of character, along with respect for the rights of others. This calls for extensive liberty of thought and action, free from governmental and societal restraint or coercion, *and* it calls for reasonable limitations on liberty to protect the rights of others.[94]

Miller concludes that public health policy can be informed both by Mill's harm principle's requirement of necessity, and the least restrictive alternative principle.[95] He claims that to

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[93] Childress et al., "Public Health Ethics," 173.
[94] Franklin G. Miller, "Liberty and Protection of Society During a Pandemic: Revisiting John Stuart Mill," *Perspectives in Biology and Medicine*, volume 64, number 2 (spring 2021), 209.
[95] Franklin G. Miller, "Liberty and Protection of Society During a Pandemic: Revisiting John Stuart Mill," *Perspectives in Biology and Medicine*, volume 64, number 2 (spring 2021), 206.

determine *which* degree and type of interventions are permissible public health officials should use the tests of necessity and least restrictive alternative.[96]

Robert O'Connor draws on Miller as he attempts to interrogate the limitations of the harm principle concerning the pandemic. In "Unmasking the Anti-Maskers' Freedom Argument," O'Connor's argument hinges on accepting Mill's harm principle and expands how we conceive of, and reduce harm to, others.[97] His acceptance of liberty-limiting action is contingent on preventing harm to others, as he broadly imagines what type of harm is conjured by non-vaccination:

> I maintain that this principle justifies the government and other social entities restricting individual freedom because of all the ways infected persons affect our interests besides spreading the virus, such as draining the welfare system, increasing medical insurance rates, raising local taxes for indigent medical bills, and clogging up ICU units.[98]

O'Connor's argument, which justifies the use of certain coercive public health tactics to prevent harm to others, attempts to weigh the restrictiveness of some measures versus others. Specifically, he defends compulsory mask and vaccine mandates by appealing to the idea that such restrictive methods are less of an infringement on one's liberty than a government-mandated lockdown. He claims that because mandates are less invasive than highly coercive actions like lockdowns, we should accept the mandates. His argument is as follows:

P1: Mask and vaccine mandates are a less restrictive alternative to lockdowns

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[96] Franklin G. Miller, "Liberty and Protection of Society During a Pandemic: Revisiting John Stuart Mill," *Perspectives in Biology and Medicine*, volume 64, number 2 (spring 2021), 207.
[97] Robert O'Connor, "Unmasking the Anti-Maskers' Freedom Argument," Association for Practical and Professional Ethics 31st Annual Conference, Cincinnati, OH, 2022.
[98] Robert O'Connor, "Unmasking the Anti-Maskers' Freedom Argument," Association for Practical and Professional Ethics 31st Annual Conference, Cincinnati, OH, 2022.

P2: We do not want lockdowns

C: ∴ Mask and vaccine mandates are justifiable[99]

Notice that his argument works only to defend alternatives less restrictive *than* lockdowns. By using a strawman fallacy, he does not consider the possibility that there are even less restrictive alternatives. In other words, he misses what is potentially the least restrictive alternative: methods of influence that leaders can utilize to reduce harm to others. O'Connor's argument is an example of a strawman fallacy because it appeals to the weaker opponent, in this case, lockdowns, and forgoes the stronger, least restrictive alternative, or influence. Simply because mandates are less restrictive than lockdowns, it does not follow that mandates are the best, least restrictive alternatives. To make his argument valid, O'Connor would need to assume a false dichotomy—namely, that our only choices are mandates or lockdowns.

I have already explored possible coercive action that can be taken to increase COVID-19 vaccination uptake. However, I now will argue that there is no coercive measure that is necessary in degree and in kind that does not infringe on one's liberty. Even as we consider using lower degrees of coercion, we must consider that liberty may still be limited by such action.

II. Trust Concerns in Public Health

Furthermore, as I have asserted in Chapter 1, public health must champion a goal to create and sustain trust between communities and the systems that serve them. Coercive power not only limits liberty but it interferes with the creation of trust. While trust may appear subsidiary to the least restrictive alternative argument, it is a strong additional reason for not

[99] Robert O'Connor, "Unmasking the Anti-Maskers' Freedom Argument," Association for Practical and Professional Ethics 31st Annual Conference, Cincinnati, OH, 2022.

relying on coercion. There are a few points I would like to briefly list here that support my argument that trust is a principal consideration in this case. For one, the idea that coercion may interfere with trust creation is possibly a consequentialist one. Alongside its intrinsic issues, there are instrumental reasons for believing that coercion is impermissible in a healthcare context. As a means, if actors rely on coercion, over time such action leads to mistrust in communities, which in turn leads to compliance failures for other public health crises. Therefore, it follows that we should not rely on using coercion to increase COVID-19 vaccination uptake because we must be cognizant of preserving trust in our healthcare system.

Another idea that supports my argument that trust is of great importance and should not be ignored as an issue in public health is due to the theory of psychological reactance. The theory of psychological reactance rests on the belief that when we, as humans, are faced with reduced choices, we react by attempting to claim the freedoms that we perceive are being taken away.[100] Psychologist Jack Brehm created this term to explain the unpleasant reaction we have when our behavioral freedoms are threatened or eliminated. The theory of psychological reactance in the context of public health helps us understand what may happen if coercion is used. Psychologist Robert Cialdini lays the theoretical foundation for psychological reactance, upon which I expand: if coercion is used to increase COVID-19 vaccination uptake, the targets of the force may react against the encroachment of liberty.[101] Thus, they may try to gain control of the thing being threatened (in this case, vaccination freedom). A target is rightly wary when an agent in control attempts to limit their choices.

[100] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 257. Cialdini cites Jack Brehm as the originator of the theory of psychological reactance.
[101] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 257.

What is more, the trust that targets have in agents of public health strengthens the adverse reaction targets may have if they fear that said agents are attempting to limit their choices. The trust intrinsic in the exchange between the state and citizens in the realm of public health exacerbates the potential for psychological reactance when that trust is threatened. Here I draw on Annette Baier's account, "Trust and Antitrust." In her paper, she examines the struggle between trust and its inverse, antitrust, and illuminates why there are possible dangers associated with agents using coercion. According to Baier, trust is a deep moral consideration that agents must account for, as it has the propensity to be betrayed.[102] Baier writes: "Trusting, as an intentional mental phenomenon, need not be purposive. But intentional trusting does require awareness of one's confidence that the trusted will not harm one, although they could harm one."[103, 104]

In line with psychological reactance, I am concerned with the outcome of distrust, or a betrayal of one's trust. Baier provides a few examples of how trust is exploited. One example is the case when one promises to care for someone and does not (either by negligence or harming them).[105] Another example is the case when one takes on more than they were entrusted with—or to Baier, the case of the babysitter who discretionarily decides to take on the additional and unnecessary "responsibility" of renovating the nursery, thus acting in an untrustworthy way by violating the limits of which she or he was entrusted.[106] The latter form of an abuse of trust may

[102] Baier, "Trust and Antitrust," 235.
[103] Baier, "Trust and Antitrust," 235.
[104] At this point, a reader may be asking what conception of "harm" Baier holds and whether her conception is aligned with versions of harm previously discussed in Chapter 2. While not specifically explicated in "Trust and Antitrust," it seems clear that Baier considers harm to be anything that one who is entrusted with something (may it be care, etc.) violates or damages. Harm is the entrusted person or entity breaking or damaging the trust of the person who trusts.
[105] Baier, "Trust and Antitrust," 236.
[106] Baier, "Trust and Antitrust," 236.

help us analyze the possible consequences of coercive public health measures. As public health agents overreach and impose beyond the limits of what they were trusted with, say, by using coercion, they, like the babysitter, become untrustworthy. In principle, simply having authority is enough to justify an agent attempting to change a target's behavior when that behavior is harmful. In practice, however, not only must it have to be the right type of authority or expertise; it must also be the case that the targets do not perceive such action to be an overreach because then it is unlikely that it will work.

If people sense their options are being limited, they may try to assert their vaccination freedom by refusing to get vaccinated—a motivational reaction that is quite possible if coercion is used. Such efforts could have counterproductive implications for public health.

With the concerns raised by the least restrictive principle and trust argument about using coercion, we are left to find another option to increase vaccination uptake if we can. As I have argued previously, we can commit to using coercion if there are acceptable harms in question and appropriate consequences. That is not the case at hand, regarding increasing COVID-19 vaccination uptake. Thus, I suggest that agents consider using an influence approach instead. Through considering an influence approach, I will in turn address the practical considerations—with trust—and the principled ones—by not coercing and instead using more subtle strategies of influence.

The Argument for Influence

I. A Kantian Objection to Using Influence

As I have stipulated earlier in this thesis, the key to increasing COVID-19 vaccination uptake is to address the root of the problem: vaccine hesitancy. Finding strategies that work to

reduce vaccine hesitancy is as much of an empirical question as a normative one. I have explored what strategies are impermissible from an ethical perspective—total liberty and coercive approaches. We reject total liberty because it unjustifiably leads to the collective harm of increased cases and deaths due to low vaccination rates. It also does not promote collective or unified action, which public health requires to achieve its goals of promoting whole-population health. We reject coercive approaches on the basis that they harm individuals by threatening trust in future confidence of public health endeavors, and if there is a least restrictive alternative, we ought to use it. I will show that there is a plausible method: public health leaders and agents are left to consider influence as an ethical method to address hesitancy.

At this point, it is necessary to voice and respond to one objection to the argument for justifying the use of influence and not coercion. Let us call this the Kantian objection. I have already defended the view that coercion is justifiable only in principle. Thus, we should instead rely on influence approaches to change the vaccination behavior of the hesitant. Many Kantians, however, have apprehension with using leaders using influence. I will turn toward Christine Korsgaard's account of deception to show the marked differences between that strategy and the influence strategies in which I am interested. Korsgaard, like many Kantians, argues that coercion and deception treat targets as mere means, and not as ends. Korsgaard presses even further, however, to distinguish between the impermissibility of deception and coercion, where she argues that deception is even worse than coercion. In support, she writes "… deception treats you as a mediate cause in a specific way: it treats your reason as a mediate cause … Physical coercion treats someone's person as a tool; lying treats someone's *reason* as a tool."[107]

[107] Korsgaard, "The Right to Lie," 334.

While both lying and coercion disrespect a target's rational agency and autonomy, Korsgaard objects to the way reason is disrespected by deception. She illuminates Kant's thoughts on the matter in a footnote: while coercion may commit an extra wrong against a target by injuring them, "Kant thinks that lying is in itself worse than coercion, because of the peculiarly direct way in which it violates autonomy."[108] The difference here is that lying is not upfront about its goal, and in a sense, treats someone less like a human than coercion does.[109] We can see how Korsgaard claims this argument through her analysis of Kant's murderer at the door situation. Although you can lie to the murderer at the door who is looking for your friend, whom they plan to murder, Korsgaard claims that if you can use physical coercion without seriously harming them, you are better off morally than if you lie. Thus, in some ways, coercion is less problematic than deception, lying, or manipulation.[110]

Price further objects alongside Korsgaard to the use of deception in lieu of coercion. Price claims that "making," or using coercion is more honest than using deception: "There is no mistaking what is going on with stock coercive threats such as, 'Your money or your life!' In contrast, the *getting* [influencing] that characterizes leadership can make it hard to see exactly what we are up against."[111] Price significantly appeals to a distinction of agency in his argument that in some cases, influence can be worse in some ways than coercion, although it is always

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[108] Korsgaard, "The Right to Lie," 339.
[109] Korsgaard, "The Right to Lie," 339.
[110] Let us approach the Kantian objection from another perspective, however. For this consideration, let us assume that Korsgaard is right and there is something more morally impermissible about deception than using physical coercion. While some situations I will interrogate later are interested in action on behalf of private agents (i.e., physicians, social groups, community advocates), in this case we also are only interested in approaches undertaken by the state, the actor in the case of public health initiatives. We must also be committed to the state using approaches to combat vaccine hesitancy that are deceitful? in nature. Finally, assuming all these stipulations are met, this leads us to the question: can the state ever be justified in exerting influence against its people? Is the state an authority figure or are they always in authority—a distinction I will explore later through Cialdini's thoughts about authority. How consensual is the power of the state? How important is the relationship between the state and their citizens?
[111] Price, *Leadership and the Ethics of Influence*, 39.

closer to the ideal: freedom, or *letting*.[112] He distinguishes between influence, which, when wrong, works "through" a target's agency, and coercion, which simply works "around" agency and motives.[113] His central tenet is that influence poses moral risk as it exploits a target's moral character, by making them unable to tell the difference between their own motivations and the leading agent's motivations.[114]

To move closer to my argument that influence infringes on one's liberty less than coercion does, we turn to Marcia Baron. Baron believes that the difference between manipulation and coercion is in resistibility: manipulation is more resistible than coercion, and influence is more resistible than manipulation. Thus, coercion is worse than manipulation, which is worse than influence. While she carefully distinguishes between different types of manipulation, some that are more discreet, others that involve willful misleading of facts, she concludes that manipulativeness often seeks to create the illusion that it obtained consent, when it characteristically did not.[115] Coercion, on the other hand, never even attempts to hide behind an illusion of consent. While there is a possible overlap between influence tactics and manipulation, manipulation is worse off in *every* case than the types of influence I am advocating for using, so I do not feel compelled to solve this problem. Baron helps us better understand that coercion and manipulation are both categorically less resistible than influence.

The type of influence I am concerned with, then, avoids the complications that arise from the Kantian objection. I am not advocating for the use of lying, manipulation, or deceptive practices to increase COVID-19 vaccination uptake. I do not encourage methods that would

[112] Price, *Leadership and the Ethics of Influence*, 9.
[113] Price, *Leadership and the Ethics of Influence*, 40-41.
[114] Price, *Leadership and the Ethics of Influence*, 41.
[115] Baron, "Manipulativeness," 43.

disrupt one's rational agency any more than coercion would. Rather, as I will shortly explore and explain, I am interested in empirically proven methods of influence that are not based on deception. These will be persuasive strategies that leaders can use to increase vaccination uptake while not damaging trust between communities and health systems, while also avoiding violating the rational agency of those these strategies intend to affect.

II. Authority as a Method to Increase COVID-19 Vaccination Uptake

As we can permit the use of influence, a question remains: what influence approaches *work* to address vaccine hesitancy, and why are leaders *permitted* to use such strategies? As public health agents determine what the effective methods are, there are limitless options to consider. For brevity, I will include only the approaches that I believe are the most compelling. I will base my approaches on the "levers" of influence that Cialdini provides in his acclaimed psychology book, *Influence: The Science of Persuasion*.[116] In this book, Cialdini puts forth seven principles: reciprocation, liking, social proof, authority, scarcity, commitment and consistency, and unity; he examines each "as to its ability to produce a distinct kind of automatic, mindless compliance from people: a willingness to say yes without thinking first."[117]

The strongest and most justifiable approaches for our case of addressing vaccine hesitancy are advocacy on behalf of authority figures—such as a primary care physician/provider (PCP), celebrities, celebrated figures in communities, corporations—and direct appeals to what others are doing. As will be discussed throughout this chapter, these two approaches align with the principles of influence of authority and social proof, respectively. Cialdini recommends using

[116] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, xv.
[117] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, xvii.

these two principles to further the goal of "reducing uncertainty."[118] As I will further explain, agents who utilize the principles of authority and social proof to increase vaccination uptake will be positively contributing to the creation and sustaining of trust.

One strong evidence-based strategy that has been used to affect vaccine behavior is using PCPs to provide an interpersonal approach to encourage vaccination and dissuade hesitancy. Primary care physicians are defined as doctors who practice family, general, general pediatrics, or general internal medicine. As physicians have a moral duty to act in the best interest of their patients, they provide an interesting starting point for how to utilize the supererogatory duties of healthcare agents to act against vaccine hesitancy. Studies have shown that vaccine behavior and "confidence is influenced by trust in the safety and effectiveness of vaccines, trust in health care delivery systems, and trust in the policymakers who develop vaccination requirements."[119] As such, healthcare leaders can harness the established trust that many people already have with their PCPs. PCPs are equipped to utilize the trust held by their patients as they are considered to be those in healthcare who have the most authority relative to both their patients and creating positive, sustained health outcomes. For many of those patients who seek regular care within the United States healthcare system, a primary physician may be the only representative from the system who stays consistent throughout different periods of a patient's life.

In recent years, data has shown a decline in the proportion of U.S. adults who see a PCP. Between 2002 and 2015, the proportion fell from 77% to 75%.[120] This decline, while changing over time by mere percentage points, indicates that millions of adults are no longer receiving

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[118] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, xix.
[119] MacDonald NE; SAGE Working Group on Vaccine Hesitancy. Vaccine hesitancy: definition, scope, and determinants. *Vaccine*. 2015;33(34):4161-4164 cited in Finney Rutten et al., "Evidence-Based Strategies for Clinical Organizations to Address COVID-19 Vaccine Hesitancy," 700.
[120] Carroll, "Declining Numbers of Americans Have a Primary Care Provider."

care from a PCP. Regardless of this trend over the past 20 years, however, this data also shows that approximately 75% of American adults rely on care from PCPs, a sizable population.

It is important to note, however, the systematic and institutionalized red tape that stands in the way of patients gaining access to PCP, especially among rural and vulnerable populations. Before the COVID pandemic, healthcare systems observed significant disparities in cost, quality, and accessibility to primary physicians.[121] These differences were only exacerbated by the pandemic and among already disadvantaged populations, including those of lower socioeconomic statuses. During the early stages of the pandemic, we saw a decreased use of primary care and preventative services, as the "pandemic led to a dramatic shift in operational priorities from improving general population health and chronic disease management to identifying patients with and at risk for the virus."[122]

In other words, due to the imminent risk of contracting the virus, our healthcare system experienced a shift away from primary care and toward emergency, triage care. As we live through the COVID-19 pandemic, we have seen a re-utilization of primary care services, albeit in a different form. Many healthcare reformers have advocated for expanded use and standardization of telemedicine for primary care, which would allow those who may face barriers to transportation and other access still receive the care they need.

While the scope of this paper is limited to researching solutions that can ethically address COVID vaccine hesitancy, I do not have the time to explore the intricacies of the argument dedicated to expanding access to telemedicine.[123] However, I am claiming that PCPs, in general,

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[121] Lin, Sattler, and Smith, "Retooling Primary Care in the COVID-19 Era," 1831.
[122] Lin, Sattler, and Smith, "Retooling Primary Care in the COVID-19 Era," 1832.
[123] Many advocate expanding telemedicine practices, especially within primary care practices, to increase access to providers, principally in a time where virtual care may be preferred over in-person.

and the relationships they sustain with patients may be one of the most effective places we can look to help increase vaccination uptake. When it comes to making healthcare decisions for those adults, PCPs may be the person a patient trusts most within the healthcare system. Thus, PCPs are best positioned to utilize their interpersonal relationships with their patients to provide them with accurate information about different interventions or treatments and to help their patients understand their values in a medical context.

There is robust data that shows how effective primary care is for creating positive health outcomes in the United States. A meta-analysis study of 10 original studies that cross-examined primary care physician supply with effects on health outcomes found that at the state level, there was "an overall declining trend in predicted mortality rate reductions from about 85 per 100,000 in 1980 to about 58 per 100,000 in 1995.[124] Significantly, the meta-analysis analyzed data that showed that the mortality rate reductions were higher for Black populations in the U.S. than for White.[125] This further demonstrates the correlation between having PCPs who can form intimate relationships with patients of all socioeconomic, ethnic, and racial identities, and improved health outcomes.

Next, let us explore why we should permit PCPs to use influence tactics to increase COVID vaccination uptake. It is the relationship between a PCP and their patient that helps us justify the use of influence methods. As part of my earlier interrogation, I suggested that we may be predisposed to be worried about state coercion. We may also assume that the state is not justified in exerting influence over us, and in believing that the state can never be a consensual

[124] Macinko, Starfield, and Shi, "Quantifying the Health Benefits of Primary Care Physician Supply in the United States," 119.
[125] Macinko, Starfield, and Shi, "Quantifying the Health Benefits of Primary Care Physician Supply in the United States," 119.

actor toward its citizens. Given this vulnerability in the field of public health, we may be obliged to turn to other actors so that we can better justify the use of influence toward followers. PCPs may very well be the type of actors who we can permit to use influence tactics to increase COVID vaccination uptake, which avoids the concerns we have about state influence.

In understanding why we may be concerned with state influence and not with the influence of primary care providers, we must understand more about relationships. In questioning the conditions under which leaders can justly compel their followers toward specific ends, Price believes the answer is consent:

> Autonomous agents can permissibly defer to the direction of someone else in the pursuit of particular ends only on the condition that they—the targets of influence—endorse the ends. It is the fact that a leader's exercise of influence can be traced to ends that followers themselves accept—in other words, the exercise of influence can be traced to their agency—that makes it possible for followers to consent to the relationship in the first place. So, consent to the relationship is not sufficient for justification; it completes the justification. Followers' agency remains intact and primary because they have ultimate say regarding both what ends are pursued and who helps them pursue these ends.[126]

The relationship a PCP has with their patient allows for an implicit bargain to occur, one that is predicated on moral ideals of consent. Within this bargain, patients entrust their health provider with serving their health needs in a consensual manner. By consenting to their provider's medical discretion, the provider helps the patients achieve their health and well-being ends. With this relationship, aligning with Price's justifications for leadership influence, a patient knows the ends that are being pursued by their PCP and actively allows their PCP to pursue their ends.

[126] Price, *Leadership and the Ethics of Influence*, 156.

While I am not advocating for the use of unnecessary medical paternalism regarding changing vaccination behavior, I believe it necessary to mention paternalism as a critical part of the patient-provider relationship. As laypeople enter these relationships with little-to-no medical knowledge, they permit their PCP to advocate for their well-being interests. This does not give a provider free-range to submit their patients to all interventions for all time without the possibility to withdraw from this relationship. However, it does allow us to understand why, while the state may not be permitted to use influence against its people for public health interventions, PCPs may be better positioned through their relationships to do so, from a moral perspective.

I am asserting that physicians can utilize their status as authority figures to influence vaccination uptake because they have consent from their patients. Some may object to this notion that consent justifies such action. Buchanan is one philosopher of note who has written about the limits of medical paternalism and denies my assertion that consent is sufficient to justify the use of influence. I believe that the PCP-patient relationship is not illegitimate in the sense that we think about paternalism. Buchanan characterizes paternalism as:

> … interference with a person's freedom of action or freedom of information, or the deliberate dissemination of misinformation, where the alleged justification of interfering or misinforming is that it is for the good of the person who is interfered with or misinformed."[127]

Buchanan believes we see evidence of medical paternalism in truth-telling and decision-making practices of physicians, as well as through the language colloquially used to characterize patient-physician interactions, at the time of his writing in 1978.[128] Buchanan denies the possibility for a relationship to exist between a patient and their physician wherein the relationship between the

[127] Buchanan, "Medical Paternalism," 372.
[128] Buchanan, "Medical Paternalism," 372.

two parties operates like a contract. In this theoretical contract, the patient would provide authorization to the physician to mitigate harm in whatever ways the physician deems fit, even if the means the physician relies on are arguably paternalistic, i.e. withholding health information.[129] While I will go on to detail why Buchanan's argument does not hold in this case, my response is that I am not talking about providers withholding information, so I am not discussing the type of paternalism with which Buchanan is concerned.

While Buchanan may find this type of consensual paternalistic relationship unreasonable, I believe a contract of this form strengthens the claim that medical paternalism can be morally justifiable due to its emphasis on consensual obligation. In cases of paternalistic authority, consent is the utmost justification to not undermine trust. While Buchanan claims that a patient cannot consent without being informed, I believe that patients can consent to *not* being informed. I further do not deny Buchanan's central claim that the patient and their family are the experts about their own well-being; however, I do believe a physician has the propensity to engage with their autonomous patient to promote the patient's ends through their consent.[130]

While Buchanan accepts that PCP-patient relationships are consensual, he does not think consent is sufficient to justify this type of influence. I defer here to Price's notion of "autonomous relationships." Price believes consent is necessary and sufficient in certain contexts to justify influence. However, my response to Buchanan's objection is that consent is necessary and sufficient for justification, as discussed by Price earlier. Buchanan's objection to patient-physician relationships fails because such relationships are justified by the necessary condition of

[129] Buchanan, "Medical Paternalism," 384.
[130] This form of paternalism differs from paternalism on behalf of a state actor, for example, due to the doubts many have that the relationship between a target and state agent is founded on consent.

consent. Further, my cases of patient-physician relationships seemingly avoid many of Buchanan's main objections to paternalistic relationships. This is on the basis that Buchanan's objections have more to do with physicians withholding information, which causes patients to have a lack of understanding. The relationships I am interested in, however, deal closely with physicians acting paternalistically to motivate their patient's actions, not acting paternalistically to withhold information from their patients. Such distinction is necessary to show how Buchanan's objections do not hold against consensual patient-provider relationships where physicians use influence to change vaccine hesitant behavior. Moreover, our case for using influence is fortified by this examination of consensual patient-provider relationships. Just because consent is sufficient to justify influence does not mean that it is necessary. Not only is influence justifiable on separate grounds (as coercion is justifiable in principle and influence is less restrictive), but it is strengthened as an argument due to the added piece of consent.

The maintenance of patient-primary care providers relationships is handled differently than those between patients and emergency department (ED) providers or those who practice other highly specialized, and context-dependent medicine. There is an expectation from patients who seek care from PCPs that their providers will understand their personal health values and aid them in achieving their health priorities throughout their life. This intimate relationship and trust can most strongly be cultivated by continued visits to the same provider year-after-year; this differs greatly from the relationship and trust many patients associate with other types of healthcare providers.

When it comes to making vaccination recommendations, PCPs can help their patients better understand the benefits and risks of accepting such treatment. As reported in a study from March 2021, during the early stages of COVID-19 vaccine distribution, respondents indicated

that they would be more willing to accept the vaccine if it was recommended by their primary clinician.[131] To work effectively to persuade COVID-19 vaccination uptake, providers must be equipped not only with scientific data that supports the intervention but also with resources on how to address socio-political factors, attitudes, and perceptions that may contribute to hesitancy among each patient. While clinician-based interventions from an interpersonal level may not provide an all-encompassing solution to addressing vaccine hesitancy, it is one place public health agents can start.

There is extensive research that supports the importance of the patient-physician dynamic. This relationship—which consists of trust and shared medical decision-making—is significant on both instrumental and intrinsic grounds.[132] From an instrumental perspective, enhancing trust helps patients navigate all aspects of their health, from medication compliance, health status, increased use of preventative care resources, to clinical outcomes, and more.[133] On intrinsic grounds, trust is the center of the patient-physician relationship and defines the quality of said relationship.[134] Ultimately justifying the patient-PCP relationship, as aforementioned, is consent.

As I specified previously, this thesis is particularly concerned to influence the vaccine behavior of those from a lower socio-economic class, and even more specifically, African Americans and White republicans within this class. As these subpopulations exhibit higher levels

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[131] Reiter PL, Pennell ML, Katz ML. Acceptability of a COVID-19 vaccine among adults in the United States: how many people would get vaccinated? *Vaccine*. 2020;38(42):6500-6507 cited in Finney Rutten et al., "Evidence-Based Strategies for Clinical Organizations to Address COVID-19 Vaccine Hesitancy," 702.
[132] Carter 1989; Lagenspetz and Akademi 1992; Rhodes and Strain 2000 cited in Hall et al., "Trust in Physicians and Medical Institutions," 613.
[133] Peek et al., "Patient Trust in Physicians and Shared Decision-Making Among African-Americans With Diabetes," 2.
[134] Hall et al., "Trust in Physicians and Medical Institutions," 613.

of institutional mistrust, physicians must work diligently to strengthen their relationships to help instill trust.

One study about shared decision-making among African Americans with diabetes and their doctors found that patient trust in their providers was enhanced "when physicians gave patients more information, including test results and general information about their health … and also when physicians gave details about the pros and cons of various treatment options;" one patient quoted in the findings section of the study said, "'I have a lot of confidence in the way he educates me, like I was telling you. He tells me a lot of things that physicians don't usually tell patients; he knows a lot and he teaches me a lot.'"[135] This quote, along with the data supporting the researchers' study about African Americans with diabetes, tells us a lot about what strategies doctors can undertake to increase trust, and thus their patients' health outcomes.

I believe empirical evidence by Cialdini is effective in supporting the claim that improving trust in patient-physician relationships is one way to change vaccine hesitant behavior. Cialdini defines "levers of influence" as psychological principles which determine the tendency to comply with a request.[136] We can view my suggested primary care provider interactions with patients as what Cialdini would refer to as the principle of authority. Cialdini argues that behavioral science has historically paved the way for us to understand that those *in* authority and those who are *an* authority figure receive the most compliance from recipients when requesting something (may it be money, a task, et cetera).[137]

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[135] Peek et al., "Patient Trust in Physicians and Shared Decision-Making Among African-Americans With Diabetes," 5.
[136] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, xv.
[137] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 200.

To delineate just how psychologically powerful authority can be, Cialdini cites the familiar Milgram electrical shock experiments, which had nothing to do with shocks and punishment and everything to do with authority. Specifically, Milgram measured how much a participant would be willing to comply with a request by an authority figure to inflict pain and suffering on another person. As many well know, Milgram's study found unsettling proof that his participants were willing to inflict substantial levels of suffering onto innocent people when ordered by the study's authority figure, whom Milgram called the "Teacher." Milgram's contentious experiments provide empirical support that allows us to understand the power of authority.

As Cialdini points out, there is a difference in how requests are perceived between someone in authority, or simply being in charge, and being an authority figure.[138] Being ordered, commanded, or controlled to do something can lead to feelings of resentment toward the person in charge. Cialdini claims that when this type of more negative authority is avoided, leaders can promote willing cooperation with requests by developing their personas as authority figures.

To begin to answer the question of interest regarding the connection between vaccine hesitancy and authority, we must first account for Cialdini's warning against the unquestioned power of those in authority. People in positions of authority often render targets of their power vulnerable both to their authority and to the substance of the request.[139] In turn, this danger creates the possibility of unadulterated compliance with whatever request is put forward by an authority figure. While I want to focus on authority figures justifiably influencing COVID

[138] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 225.
[139] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 213.

vaccination uptake, I heed Cialdini's warning to stay clear of coercion that masquerades as justified authority.

Justified authority figures, however, must be perceived to possess two features by their followers to be seen as credible: expertise and trustworthiness.[140] Cialdini cites research that shows how magnanimous of an effect expertise creates for a leader's credibility. As a relevant example, a doctor's office that displays multiple diplomas and certificates on the walls cultivates a "halo effect" around that doctor and the information they relay to their patients.[141]

Trustworthiness exhibited by an authority figure adds to their perceived credibility, as well. One approach Cialdini encourages to create trust is for an authority figure to be upfront and honest about the drawbacks or negative consequences associated with a case they are presenting.[142] In the case of a doctor as an authority figure, Cialdini would suggest they mention the weaknesses of the medical intervention or treatment they are recommending to a patient early in the communication. Crucially, this allows a patient to perceive their physician as honest, which productively contributes to them being recognized as an authority.[143]

I want to raise one potential counterargument to Cialdini's claim that an authority figure must exhibit qualities of expertise and trustworthiness to be a compelling leader. It is possible to perceive an authority figure as an expert but not consider them to be trustworthy. Such is the case with government agencies, such as the National Institute of Health (NIH) and CDC. While these

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[140] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 226.
[141] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 226.
[142] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 227-228.
[143] This only holds, however, if the physician brings up a drawback in a genuine manner. An interaction of that type would legitimize their authority. If a physician is only bringing up negative consequences to bolster their own authority, while it certainly may work to shape how they are perceived by their patient, it does nothing to morally legitimize their authority.

agencies may be perceived as experts on matters related to public health, many in the United States do not consider them to be trustworthy news sources because of their explicit political allegiance. While this may speak to a greater issue of the increased polarization of topics such as healthcare, this is not within the scope of this thesis to discuss this problem at great length. Rather, I am asserting that for a leader to be considered *an* authority figure, and not (according to Cialdini's distinction) *in* authority, they must be perceived as both an expert and trustworthy. If not, they do not possess the necessary power to exert influence on their followers, which may be the case we have seen throughout the COVID-19 pandemic with the NIH, CDC, and other government healthcare agencies.[144]

There is a question I have not fully broached about who gets to use influence. Many people believe that the state has a monopoly on using coercion. However, I have already shown that in this case, the state cannot justifiably engage in coercive practices since there are less restrictive alternatives. Thus, if the state cannot use coercion, that opens the door for who, or what entity, is permitted to use influence, a less restrictive method. While, for much of this section, I have discussed healthcare providers permissibly using influence, other entities can justifiably engage with influence methods to increase vaccination uptake. There are other tactics non-state actors can employ to increase trustworthiness perceived by their targets of influence. We are not just limited to looking at physicians: other agents interested in ethical persuasive strategies include community leaders, celebrities, and private corporations and leaders in a field. One recent example came manifest in an email CVS Health Pharmacy sent out to consumers on a

[144] I started this thesis with an anecdote about the immense power that the CDC has; when they make claims, people tend to listen, for better or for worse. However, at this point, after interrogating the importance of consent in relationships, and the possibility that perhaps consent cannot exist between state agencies like the CDC and targets, I am making the claim that other actors may be better suited to use the influence approaches I am interested in, such as PCPs and community leaders, to name a few actors.

listserve in March 2022; the email was aptly titled "Trust Our Experts to Deliver COVID-19 Vaccine Information."[145] The content of the video included a photograph of a pharmacist, graphical information about COVID vaccine questions, and a list of support resources for interested patients to learn more about COVID and testing/vaccination options.

This email message accomplished much of what Cialdini advised for creating a sense of trustworthiness between an agent and target: it was not coercive in its messaging, it included information about possible adverse reactions to receiving the vaccine, it was transparent, and it came from a reputable source (CVS Pharmacy, the current largest pharmacy chain in the United States). I include this example to illustrate an example of a message that can be perceived by targets as trustworthy, by a corporation that is considered to have expertise. There is no morally relevant difference between using this case as an example of influence that helps increase vaccination uptake and one with a PCP-patient relationship. I assert this idea as we do not need consent or consensual relationships with every authority figure (really, it is only necessary to legitimize paternalistic authority); rather, it is sufficient to have trustworthiness and expertise to cultivate trust in many authority-target relationships.[146]

Since the goal of this thesis is to identify approaches to increasing COVID-19 vaccination uptake in non-coercive, persuasive manners, it is prudent to see the association between authority and trust. For patients who seek care from a PCP, they rely on this provider to be the source of information that has implications for their health and the health of their family. In cases of vaccine hesitancy, they may turn to their PCP to help digest complex, scientific jargon associated with vaccine benefits and risks. Furthermore, they may be interested in how to

[145] CVS Pharmacy, "Trust Our Experts to Deliver COVID-19 Vaccine Information," Email, 2022.
[146] Consent is not necessary when we are attempting to influence behavior in "non-harmful" ways.

analyze the risk-benefit scenarios for their own lives to determine what the best course of treatment action is. Physicians who effectively incorporate Cialdini's principles of credibility, expertise and trustworthiness into their practice are better equipped to serve as authority figures to advocate for their patients' health values and goals. By having a strong foundation as authority figures, they can utilize this position to encourage their hesitant patients to get the COVID-19 vaccine. Thus, agents are permitted to use authority as an influence strategy to increase COVID vaccination uptake.

III. Social Proof as a Method to Increase COVID-19 Vaccination Uptake

An additional strategy that has been used to affect vaccination behavior among hesitant populations is through the application of the principle of social proof, or social norms or consensus. According to Cialdini, the social proof theory is as it sounds:

> This principle states that we determine what is correct by finding out what other people think is correct. Importantly, the principle applies to the way we decide what constitutes correct behavior. *We view an action as correct in a given situation to the degree that we see others performing it.*[147]

The principle of social proof is particularly indicative of how willing people are to act in accordance with others under three optimizing conditions, according to Cialdini: in cases of uncertainty, in cases of the many, and in cases of the similarity.[148] First, let us explore cases of uncertainty. When situations are ambiguous, or the right answer is not clear, we are apt to seek out the behavior of others to illuminate how we perceive we should be acting.[149] It is obvious how persuasive others' actions may be during a pandemic, where uncertainty is commonplace

[147] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 129-130.
[148] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 143.
[149] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 143.

and rampant. Pairing the uncertainty of the COVID pandemic with the uncertainty of the COVID vaccine, Cialdini's examination of social proof illustrates why appealing to social proof may be an effective method of influence to increase vaccination uptake.

Similar is the case under the second optimizing condition: the case of the many. As Cialdini succinctly explains it, the case of the many is: "The More We See, the More There Will Be."[150] There are certain reasons why social proof works in the case of the many. One factor that helps explain the influence of social proof is validity. We are inclined to use the actions we observe others taking to validate what we perceive to be a correct choice.[151] Cialdini points out that for one to confirm that a certain option or choice is valid does not require complex cerebral processes to occur; establishing validity from others' actions is a simple, automatic process.[152]

In a related vein, two other factors that explain the case of the many are feasibility and social acceptance. Feasibility communicates to those seeking to decide something that if many people can do something, if they can bring about an action, it can and *must* be doable.[153] With social acceptance, we see a yearning to conform with the group and popular action that is being taken. Psychologically, humans are engineered to experience stress when they hold an opinion or take an action that is not in line with those held or taken by the group.[154]

Finally, under the third optimizing condition, the case of the similarity, we learn that people are susceptible to following the lead of a group due to the phenomenon of "peer-suasion."[155] Cialdini quotes economist Robert Frank, who studied environmental behavior

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[150] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 153.
[151] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 157.
[152] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 157.
[153] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 160.
[154] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 161.
[155] Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 163.

change: "By far the strongest predictor of whether we install solar panels, buy electric cars, eat more responsibly, and support climate-friendly policies is the percentage of peers who take those steps."[156]

IV. Moral Justifications for Using Influence

Since we have explored how social proof works to persuade and influence people, we need to now ask why public health leaders are permitted to turn to employ such a method. The main moral reasoning for using social proof principles—like the reasoning that justifies the use of authority principles—is that it is less restrictive than using coercion, and it does not undermine trust in public health. Regarding the first reason, we have thus far established that coercion is justifiable, in principle, to increase COVID vaccination uptake. However, given the least restrictive alternative principle, we ought to use methods that infringe less on a target's liberty than coercion does. Social proof, the process by which people do something because they see others doing the same thing, is not morally questionable in the same sense that coercion is, as it leaves a target with their liberty intact to decide how to act in a given situation.

Consider the following example from a recent experiment that examined the efficacy of using social norms to influence COVID vaccination behavior:

> … we told some respondents, "Your responses to this survey are helping researchers in your region and around the world understand how people are responding to COVID-19. For example, we estimate from survey responses in the previous month that X% of people in your country say they will take a vaccine if one is made available", where X is the (weighted) percent of respondents saying "Yes" to a vaccine

[156] Robert Frank, *Under the Influence: Putting Peer Pressure to Work* (2020) cited in Cialdini, *Influence, New and Expanded: The Psychology of Persuasion*, 164.

> acceptance question. Other respondents received information on how many "say they may take a vaccine", which is the (weighted) percent who chose "Yes" or "Don't know" for that same question.[157]

Their study found that descriptive norms—or what other people in a group think, feel, or do—showed a positive correlation with vaccine acceptance:

> Beliefs about descriptive norms are in turn positively correlated with vaccine acceptance, likely reflecting many processes, such as geographic and social clustering of vaccine hesitancy, but also causal effects of beliefs about others on intentions to accept a vaccine. Public health communications could present information about norms, perhaps correcting some people's overestimation of the prevalence of vaccine hesitancy. Unlike other ongoing, frequently observable preventative behaviors, like mask wearing, people may have little information about whether others intend to or have accepted a vaccine — which suggests messages with this information could have particularly large effects.[158]

Social proof, put simply, works. If people who are like you do something, it follows that you, too, should do it, because implicit is a testimonial. It is convincing to see someone, in cases of uncertainty, the many, and/or the similar, doing something because it insinuates that you will also be successful in doing the same thing. If any objector raises concerns about the ethics of using social proof, my response is that it is sufficient to rely on social proof because it is highly effective, *and* we have already agreed that coercion is justifiable, and social proof is less restrictive than turning to coercive methods.

The next moral reason in favor of leaders using social proof and authority is that, unlike with coercion, influence tactics generally go unrecognized; thus, in and of itself influence poses less of a concern to undermine trust than coercion does. In building a principled case against

[157] Moehring et al., "Surfacing Norms to Increase Vaccine Acceptance," 5.
[158] Moehring et al., "Surfacing Norms to Increase Vaccine Acceptance," 5.

leaders using influence, Price inadvertently helps us strengthen our argument that influence is justified in our case of addressing vaccine hesitancy:

> Unlike coercion and deception, influence usually plays by the general moral rules. It also tends to draw on behaviors that are commonly used to express respect. As a result, a lot of behaviors that might be used to exercise influence look morally permissible, good to do, or even morally required … What causes trouble for an ethical analysis of these tactics is that the overt behaviors are the same as in cases of simply giving a compliment, providing help to someone, or offering advice. In other words, the behaviors cannot be differentiated in terms of what is visible to observers.[159]

Price's admission that influence is unrecognizable, contrary to coercion or deception, helps us conclude the point that because it is less observable, there are fewer trust concerns. If those who are the targets of influence do not recognize influence methods being used on them, they have no reason to feel their trust is being undermined—in the sense that recognizable methods of action, like coercion or deception, do undermine a target's trust.

Because influence and social proof are both less restrictive alternatives to coercion—and coercion has previously been determined to be justifiable, in principle—and they do not undermine trust, it follows that they are permissible methods leaders can utilize to increase COVID-19 vaccination uptake.

[159] Price, *Leadership and the Ethics of Influence*, 24-25.

Conclusions

Throughout this thesis, I discussed ethical strategies leaders ought to use to increase COVID-19 vaccination uptake. In Chapter 1, I broadly examined the problem which I have attributed to the continuation of the pandemic: vaccine hesitancy. I first defined the problem and analyzed the historical arguments to explain why vaccine hesitancy has persisted over time. Vaccine hesitancy has been upheld for as long as the science of vaccinations has existed. The problem is perverse in the United States and around the world, as it threatens the public health goal of containing and eradicating vaccine-preventable diseases. Thus, my foremost goal in this thesis was to understand why vaccine hesitancy has prevented high enough levels of inoculation in the U.S. to stop COVID-19 from spreading and decimating communities.

Liberty is a weighty concern that has affected how different populations perceive government intervention in the form of vaccination, and thus, has led to the continued prevalence of vaccine hesitancy. As I detailed in my first chapter, however, it is not enough to simply claim that liberty has led to vaccine hesitancy, as there are more nuanced considerations public health agents must account for. I found two specific considerations under the "liberty concerns" umbrella: government skepticism founded on both practical and principled considerations. Practical considerations can be identified as trust concerns in public health, particularly stemming from distrust created due to legacies of medical racism and inequity—which we have seen specifically among vaccine hesitant Black and Brown Americans of a lower SES. In this section, I studied the idea of public health as a common good and how that sentiment has failed to reconcile with medical distrust. As such, because the weakening of the common good, alone, has failed to explain vaccine hesitancy, I turned toward understanding how the extensive history

of unethical surgical experiments on Black people in the U.S., including the Tuskegee Syphilis Study, has resulted in low levels of social trust in institutions such as public health.

The other consideration, government skepticism based on principled considerations, led me to argue that there has been a detrimental conflation of advocating for individual liberty and asserting one's right to avoid government infringement by not participating in the common good of public health. The symptoms of such a belief have brought about vaccine hesitancy as it relates to COVID-19 vaccination uptake.

The latter half of Chapter 1 was focused on developing arguments for the spectrum of strategies leaders ought to consider using to address vaccine hesitancy: coercion, influence, and total liberty. I first broached discussing a total liberty approach—which I ultimately concluded is neither effective nor morally permissible for increasing COVID-19 vaccination uptake. To arrive at this conclusion, I contended that public health requires collective and concerted action to serve its intended population: the public. Adopting a total liberty approach toward vaccination would have adverse effects such as avoidable increases in both cases and deaths, and it would cause great collective harm. Thus, I next introduced coercion as a potential permissible strategy for increasing COVID vaccine uptake. My starting point for doing so was through addressing vaccine mandates, a form of public health coercion. I discussed a timeline of vaccine mandates—ranging from 1905 and the introduction of a constitutional basis for such mandates through *Jacobson v. Massachusetts*—and working through cases in following years that support the state's authority in mandating vaccination. At the conclusion of this chapter, I acknowledged that while there is robust history that provides for constitutional support for vaccine mandates, this thesis ought to next consider whether coercion *is*, in fact, justifiable.

In Chapter 2, I considered the permissibility of coercion from the perspective of preventing harm to others. Taking this framework naturally led me to explore the classic liberal arguments of John Stuart Mill, a famous theorist of liberty, and Joel Feinberg, a value pluralist who still champions liberty. Both Mill and Feinberg provide conceptions of the harm principle, on which much of Chapter 2 relies heavily. I first distinguished through differing versions of harm, namely, what the state is justifiable in doing in preventing harm. I took the stance that non-vaccination poses harm to others, and the state is justifiable in preventing harm to others (rather than harm to oneself). As such, according to Feinberg, we can view non-vaccination as a conception of harm that is an impermissible wronging, which means it poses a reckless or negligent invasion of others' welfare interests.

To apply the harm principle to the case of the COVID-19 vaccination, I turned to the account of philosopher Jessica Flanigan in "A Defense of Compulsory Vaccination." Here, I drew on Flanigan's conditions that permit compulsory vaccination by seeing how they held to the COVID-19 vaccination. The four conditions are as follows: the vaccine in question works against a contagious illness, as opposed to a non-contagious illness; people must not consent to the risks of transmission; the vaccine must be effective at limiting the risks of contagion and cannot be ineffective or outdated; and, vaccination must not limit one's self-defense in the name of public health. My assumption from the start was that these four conditions were acceptable, and when they were properly satisfied by the case at hand, sufficient in making coercion justifiable.

I showed how all Flanigan's conditions appeared to look met when applied to the application of the COVID-19 vaccine before turning to consider possible objections. To respond to my most outstanding objections to Flanigan's conditions, which proffered the complicated

reality of the pandemic and available COVID-19 vaccines, I devised a theoretical—or model—case in which there was a COVID-19 vaccine that *perfectly* met Flanigan's conditions. As I described, in this model case all four conditions would be unconditionally satisfied because: there would be a virus that has maximal contagiousness and is always deadly; no one would have control over contracting the virus or not; the vaccine available would be 100 percent effective and restricting the spread of the disease; and, the vaccine would have no side effects and not pose any risk to those who take it. In this model case, I argued that we would be justified in using the most vigorous forms of coercion—far past the lower level of vaccine mandates—to increase vaccination uptake.

Before concluding Chapter 2, I discussed possible objections to the analogy on which Flanigan's argument rests. My biggest objection was to Flanigan's misapplication of the standards of culpability. While Flanigan claims that non-vaccination is like random gunfire in that it is reckless in the level of risk it poses to bystanders, I argue that non-vaccination more aptly looks like negligence. Nevertheless, I still conclude at the end of this chapter—even considering that our actual COVID-19 vaccine is not like the one in the model case for coercion and that Flanigan's analogy overstates the risk posed by non-vaccination—that Flanigan's four conditions to permit liberty-limiting action are satisfied. While I argue that the threshold has *not* been met to justify vigorous and extreme forms of coercion, the threshold *has just* been met to make lower levels of coercion justifiable, in principle, to combat non-vaccination.

At the beginning of Chapter 3, I continued the discussion about the normative reasons that make lower levels of coercion justifiable, in principle, to address non-vaccination and, more specifically, vaccine hesitancy. I then turned to explain why I qualified my conclusion in the previous chapter: even while justifiable, in principle, there may be an argument that leaders

should not use coercive strategies to increase COVID-19 vaccination uptake because of concerns for individual harm. I based my argument on two claims: firstly, coercion is not the least restrictive method, and leaders ought to use the method that least limits peoples' liberty; secondly, coercion threatens trust in public health efforts.

What followed next was an exploration of the argument against using coercive strategies. I first discussed the least restrictive alternative principle. This principle requires that agents, when given a choice between actions that promote differing ends, choose the action that limits the liberty of the action's target the least. Simply put, coercion should only be used in ways that are *necessary* and *proportional* to the harm it is attempting to prevent. In this section, I further explored the least restrictive alternative principle and why it ought to be considered in my case of increasing COVID-19 vaccination uptake. I drew on other accounts that have applied the principle to public health, including those of Franklin Miller and Robert O'Connor, and highlighted the specific shortcomings of the latter's argument.

Next, I explained why one of the foremost goals of public health must be to create and sustain trust between communities and the systems that serve them. To support my argument, I related the theory of psychological reactance to the question this thesis has sought to answer, as well as philosophical theory about trust and distrust from Annette Baier. Thus, we are left to find another option to increase vaccination uptake if we can. To satisfy the need for a least restrictive alternative that does not engender trust concerns, I propose that agents consider using an influence approach because I address two considerations: practical considerations—involving trust—and principled considerations—by not using coercion and instead using subtle forms of influence.

In this section of Chapter 3, after raising and responding to what I have called a Kantian Objection to Using Influence, I moved toward a discussion of influence strategies that work to address vaccine hesitancy. To answer this question, I deferred to Robert Cialdini's proclaimed levers of influence, specifically highlighting the strongest two principles: authority and social proof. I spent considerable time explaining how authority figures, most convincingly in the form of primary-care providers, can justifiably use influence to enact behavior change among vaccine hesitant patients. To do so, I relied on both an empirical and normative discussion about the effectiveness and permissibility of authority figures using influence. From there, I interrogated the second of Cialdini's relevant principles, social proof theory. I supported my argument that social proof—or using the actions of one or a group to influence the behavior of another—is both effective and justifiable to increase vaccination uptake. Both authority and social proof as strategies are least restrictive alternatives to coercion and do not cause trust concerns in public health; as such, it follows that they are permissible methods leaders can utilize to increase COVID-19 vaccination uptake.

We are still left with a question of why agents *ought* to use influence methods—and not just that they are permitted to do so. There is a considerable cost for which leaders must account if the pandemic is continued: this cost takes the form of cases and deaths due to the virus. Public health leaders are permitted to act immediately, and this action must be both effective and ethical. As I asserted in the introduction of this thesis, leaders have a supererogatory moral claim to increase vaccination rates. Throughout this thesis, I have shown the means that are permissible for leaders to use, given that they already have other duties and responsibilities to protect the common good of public health. Since I have shown what is permissible, leaders need only look at their duties to decide how they ought to act. In this case, leaders can look at their already

defined duty of protecting the health of the community and permissibly make a claim for what they ought to do: use influence strategies to increase COVID-19 vaccination uptake.

In conclusion, my main goals for this thesis have been the following: understanding vaccine hesitancy, deciding on the version of harm that non-vaccination poses to innocent bystanders, determining what the role of the state is in preventing harm to others, and analyzing the ethical strategies leaders ought to use to increase COVID-19 vaccination uptake. One primary yet unspoken goal of this thesis, however, was to create an ethical framework on which leaders can rely to shape public health action. As influence methods are less restrictive in terms of their effects on liberty and do not threaten the trust between communities and systems, I have systematically argued that they can be used to motivate specific behaviors. While in the case of our current pandemic I urge leaders to consider influence strategies to increase COVID-19 vaccination uptake, I ultimately see the philosophical arguments included in this thesis as generalizable past the current pandemic, past COVID-19.

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