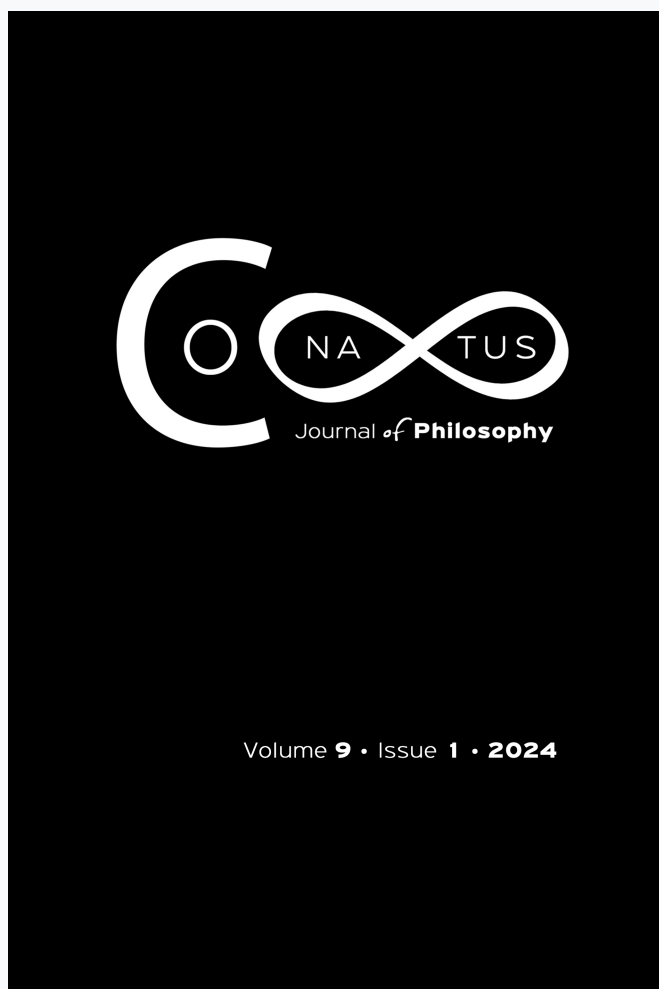


Conatus - Journal of Philosophy

Vol 9, No 1 (2024)

Conatus - Journal of Philosophy



Social Exclusion of People Who Abstain from Mandatory COVID-19 Vaccination for Medical Reasons: A Contemporary Ethical Conflict

Virginia Grigoriadou , Sofianna Alifieri, Sofia Tsagdi, Maria Balatsou, Kostas Theologou

doi: [10.12681/cjp.31650](https://doi.org/10.12681/cjp.31650)

Copyright © 2024, Dr. Grigoriadou Virginia, Sofiana Alifieri, Dr. Tsagdi Sofia, Balatsou Maria, Prof. Theologou Kostas



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0](https://creativecommons.org/licenses/by-nc/4.0/).

To cite this article:

Grigoriadou, V., Alifieri, S., Tsagdi, S., Balatsou, M., & Theologou, K. (2024). Social Exclusion of People Who Abstain from Mandatory COVID-19 Vaccination for Medical Reasons: A Contemporary Ethical Conflict. *Conatus - Journal of Philosophy*, 9(1), 45–71. <https://doi.org/10.12681/cjp.31650>

Social Exclusion of People Who Abstain from Mandatory COVID-19 Vaccination for Medical Reasons: A Contemporary Ethical Conflict

Virginia Grigoriadou,¹ Sofianna Alifieri,² Sofia Tsagdi,³ Maria Balatsou,⁴ and Kostas Theologou⁵

National Technical University of Athens, Greece

Abstract

The measures of obligatory vaccination against COVID-19 disease in Greece, have failed to cater to people, who for serious medical reasons, were prohibited by their private doctors to be vaccinated. This fact, however, leads to their unwilling social seclusion, since they cannot obtain the vaccination certificate that ensures access to all social activities. They are, therefore, faced with the dilemma of consenting to vaccination, disregarding possible health or even fatal consequences, or social exclusion and isolation. This research study aims to discuss this ethical conflict, between what is considered ethical for society in contrast to restriction of personal will and health. It wishes to rediscover the very essence of the commitment to protecting human rights-health and social well-being. This dilemma will be viewed and examined under the scope of core ethical values and principles met in Hippocrates' oath and the fundamental ethical theory of Utilitarianism. The study will try, drawing from these ethical theories and definitions, to test these questions and conclude on what the indicative ethical choice is. The study wishes to propose suggestions of measures that can be taken to ensure equal operations for all citizens, based on medical ethics and self-disposition principles. It will also propose actions that should be put in the equation, sensitive groups. We feel that a balanced ethical approach that does not accentuate disparities within and among different groups, could ensure health equality, better social resilience, and commitment to effective prospective preparedness.

Keywords: *utilitarianism; human rights; vaccination hesitancy; social exclusion; Aristotle's golden rule*

¹ E-mail: virgi.grigoriadou@gmail.com

² E-mail: sofiannaparos@hotmail.com

³ E-mail: stsagdi@gmail.com

⁴ E-mail: mariabalatsou@mail.ntua.gr

⁵ E-mail: cstheol@central.ntua.gr

ORCID iD: <https://orcid.org/0000-0002-0940-1922>.

ORCID iD: <https://orcid.org/0009-0003-9196-922X>.

ORCID iD: <https://orcid.org/0000-0002-9515-7283>.

ORCID iD: <https://orcid.org/0009-0007-6147-8293>.

ORCID iD: <https://orcid.org/0000-0002-3883-601X>.

I. Introduction

The ethical dimension of scientific research has been discussed by many philosophers and scientists since the ancient years. The roots of medical ethics are found in the oath of Hippocrates (4th century BC). The significance of the bioethical principles of Hippocrates is accepted to this day, as they are often incorporated into the ethical regulations and considerations of modern universities. According to the oath of Hippocrates, the doctors swore that they would transmit to subsequent physicians the medical knowledge and basic ethical rules and principles.¹ Doctors were also committed that they would apply the therapeutic methods to help patients according to their ability and judgment, but never to harm or cause intentional damage to them, and that they would not give a deadly drug to anybody even if one asked for it, nor they will suggest anybody take such a drug.² Moreover, a doctor is committed to applying all measures required for the patient, avoiding those “twin traps” of overtreatment and therapeutic nihilism.³

Although ethics in research and the application of scientific achievements concern modern societies is controlled through specific committees and regulatory frameworks in universities and other bodies, in some cases the boundaries between what is ethical and what is not are blurred, specifically when an emergency does not allow the conducting extensive experiments that will ensure the effectiveness of a medical method, but it requires a quick decision. This kind of situation often leads to moral conflicts and raises moral dilemmas.

A contemporary ethical dilemma arises from the mandatory vaccination against the COVID-19 disease in Greece. The rapid and widespread pandemic, which intensifies over time, has attracted worldwide scientific interest and, has turned the research efforts to the investigation of methods capable of tackling the virus, with the most important achievement to this day being the discovery of the vaccine. To prevent the spread of coronavirus, governments have implemented a series of mandatory measures, a tactic that is followed in emergencies. The case of COVID-19 had the most basic characteristic of an emergency condition: the need to recognize and manage it in the shortest possible time, with possibly a large percentage of losses until the appropriate way of reaction is found. Clearly, the concept of autonomy in any emergency

¹ Dimitrios Lipourlis, *Hippocratic Medicine* (Athens: Epikendro, 1983), 79-94 [in Greek].

² Ibid.

³ Jay W. Marks, “Medical Definition of Hippocratic Oath,” https://www.medicinenet.com/hippocratic_oath/definition.htm.

situation is a basic principle, but it must always be examined in relation to time. In Greece, several emergency measures have been taken to tackle the pandemic, such as the mandatory vaccination of medical and nursing staff, the restriction of the movement of unvaccinated citizens through the ban on entry to indoor places such as restaurants or cafes, and the imposition of a fine on unvaccinated citizens over 60 years of age. Although the purpose of the implementation of these measures was the protection of the health of Greek citizens, it is observed that there was no provision for a possible exemption from vaccination of certain population groups that are forced to abstain from it for health reasons, resulting in their social exclusion. In this context, several Greek people are faced with an ethical conflict as they must decide whether to get vaccinated, to avoid social exclusion by endangering their health, or whether to abstain from vaccination and at the same time from a significant number of social activities. In other words, they must choose between the consent to which there is a serious risk to their health and the refusal that implies social exclusion or differently they must choose between their “egocentrism and social tropism.”⁴ This moral conflict is encompassed in the context of reflection in which compulsory vaccination is possibly the better choice for society and humanity, as could be suggested by theories of utilitarianism and communitarian ethics, but it significantly reduces the freedom of will according to an issue that directly concerns every single person.

In this paper, we examine highly important aspects of this ethical conflict. In the first section, the theoretical framework on which our research is based is formed through the approach of the basic principles of the Hippocratic Oath, the theory of utilitarianism, communitarian ethics, and Aristotle’s *Golden Mean* theory. Throughout the same section, we also approach the issue of human rights in times of emergency what differentiates medicine is the concern and focus on fundamental individual rights. In the third section, we approach the core issues related to vaccination hesitancy during the COVID-19 era, across diverse contexts and try to conclude the case of Greece. Moreover, we aim to deepen and analyze the main reasons Greek people hesitated to vaccinate. Finally, we conclude that the optimal solution can arrive from “moderate utilitarianism” which is suggested as the golden mean, as the moderation between the mandatory (exaggeration) and the optional (lack) character of the vaccination.

⁴ Emmanuel Roberto Goffi, “Back to Eudaimonia as a Social Relation: What Does the Covid Crisis Teach Us about Individualism and Its Limits?” *Conatus - Journal of Philosophy* 7, no. 2 (2022): 105-118.

The purpose of this paper is to address these issues by participating in the open, contemporary, and extremely popular dialogue that often comes from the ethical dilemma of whether the imposition of mandatory vaccination promises the protection of the whole but implies the restriction of the individual free will is preferable, or if the option of vaccination or non-vaccination should be provided to everyone. One of our core purposes is to provide suggestions for measures that can be taken, to ensure equal operations for all citizens, based on medical ethics and self-disposition principles. Finally, the study wishes to conclude the indicative ethical choice, based on the strong belief that a balanced ethical approach that does not accentuate disparities within and among different groups, could ensure health equality, better social resilience, and commitment to effective prospective preparedness.

II. From the Hippocratic Oath to the core modern principles of Bioethics

Medical science is the science that has as its object the restoration of the health of the individual and its preservation. As early as 3000 BC, in the first societies in the Mediterranean region and the Assyrian and Sumerian civilizations, up to the Egyptian civilization (1500 BC), it is understood that the medical function was established over the centuries. The greatest recognition comes in 6000 BC, in a century wherein Ancient Greece we meet Hippocrates, the “Father of Medicine,” who consolidated the systematic approach to the patient for the first time.

Hippocrates, in addition to being innovative for the time of the patient’s approach by doctor, establishes the ethical rules related to his function. These ethical rules are summarized in the oath of Hippocrates, which is the statutory charter of medical ethics.⁵ This is essentially the first text of the principles of ethics of the medical function, which reveals the maximum respect for the patient but also the rules and principles that protect the medical function. Therefore, the Hippocratic Oath is one of the most widely known ethical medical texts, that articulates and ensures the relationships between patient and doctor. Specifically, it delineates the responsibility that needs to govern the doctor in terms of diagnosis and prioritizes the health and safety of each patient. The Hippocratic Oath shields vulnerable groups that

⁵ Theodoros K. Stefanopoulos, Stavros Tsitsiridis, Lena Antzouli, and Kritseli Giota, “Hippocratic Oath,” *Anthology of Ancient Greek Literature*, https://www.greek-language.gr/digitalResources/ancient_greek/anthology/literature/browse.html?text_id=220 [in Greek].

can be exploited more easily.⁶ Until the 19th century, the oath of Hippocrates was the only ethical text that accredited the protection of the patient's rights as well as his indirect protection from any kind of exploitation. The international community recognized the need to establish rules that would limit the treatment of a patient and considered it appropriate to establish provisions and principles.⁷

Over the years and reaching the 20th century when the rapid evolution of technology and the genesis of achievements took place by applying them to every aspect of human life, medical science, like all sectors of human society, was strongly tested. In addition, historical events during the 20th century were the reason for the need to create International Convention to protect human rights. A decisive turning point in the history of Medical Ethics was World War II and the atrocities of Nazi physicians during the war against persecuted populations. The Auschwitz-Birkenau, Mauthausen-Guzen, and Dachau camps were places of martyrdom and violation of every notion of rights for those who did not meet the "standards" of the ideal man worth living in the Third Reich. Jews, gypsies, homosexuals, communists, but also prisoners of war, were the target populations whose extermination had to be achieved by all means, since they were first used as workers or as experimental objects in the hands of Nazi doctors.⁸

Thus in 1947, in light of these heinous crimes of the Nazis who conducted inhumane experiments on the above weaker sensitive defeated parties, the first reference to these principles was made in the Nuremberg Code, which was signed and adopted by the General Assembly of the United Nations, held in December 1948, accepted articles of the Declaration, human rights are protected in many ways, while as a text it was the basis for texts and conditions of the future.⁹ So, for the first time, the idea of "informed patient" consent is introduced, which changed the firm paternalistic models of patient treatment. They were expressed in the same direction as other ethical texts, with emphasis on key commonalities to the freedom and right of patients to self-determination, the protection of their health and dignity, and their right to

⁶ Stavroula Paraskevopoulou, "Human Rights and Mental Illness: The Limits of the Freedom of Persons with Mental Illness." *Ethics. Journal of Philosophy*, no. 12 (2019): 66-67 [in Greek].

⁷ William E. Morgan, "Hippocrates on Ethical Practice Management," *Journal of Chiropractic Humanities* 11 (2004): 44-48.

⁸ Benno Müller-Hill, *Murderous Science: Elimination by Scientific Selection of Jews, Gypsies, and others in Germany 1933-1945*, trans. George R. Fraser (Oxford: Oxford University Press, 1984).

⁹ Available at <https://www.ohchr.org/en/universal-declaration-of-human-rights/illustrated-universal-declaration-human-rights>.

take an active part in the therapeutic process.¹⁰ The treatment that can be imposed is only intended to protect them in very special cases. In a similar vein, other ethical texts were proclaimed emphasizing the commonalities of the freedom and right of patients to self-determination, protection of health and dignity, and the patients' rights to take an active part in the therapeutic process.¹¹ At the same time, in the coming decades, new medical issues came to be added to the traditional ones, while it was realized that the ethical rules that had been in force informally until then were not sufficient to manage the new issues. There was an urgent need to create a new medical ethic, modern in its time, that would offer the right tools to those involved to manage any issue for the benefit of the patient. This new ethics, medical ethics, is part of the ethical philosophy and draws from philosophical theories as many principles as it seeks to equip its theoretical background. A point of convergence of the devotees of each theory is the acceptance of the basic principle of Medical Ethics: all people have the same rights despite any differences in philosophical theories, thanks to their common human nature.

According to these theories and texts, the ethical rules formed in modern medicine are based on four principles: the principle of benefit, justice, and parity which have their roots in antiquity, and the principle of autonomy, which is a new addition.¹² The above can be related to the Aristotelean virtue ethics, which can provide answers to modern moral dilemmas other moral theories fail to meet, such as the ethics of duty and the ethics of consequences.¹³ The theory of virtue comes from ancient Greece and shows Socrates' way of thinking, Plato, and especially Aristotle.¹⁴ According to Pellegrino, Virtue Ethics prioritizes the patient's interest over the interest of the Doctor. It is a theoretical model of the application of ethical rules in individual cases that aims to act as a guide. This theory emphasizes the characteristics a person must have to be called virtuous and make the right decisions afterward. That means that we are interested in exploring those characteristics that

¹⁰ Evelyn Shuster, "The Nuremberg Code: Hippocratic Ethics and Human Rights," *The Lancet* 351, no. 9107 (1998): 974-977.

¹¹ Nikos Bilanakis, *Psychiatric Treatment and Human Rights in Greece* (Athens: Odysseas, 2004), 12-34 [in Greek].

¹² Tom L. Beauchamp and James F. Childress, *Principles of Biomedical Ethics* (Oxford: Oxford University Press, 2001), 57-112.

¹³ Greg Pence, "Virtue Theory," in *A Companion to Ethics*, ed. Peter Singer, 249-258 (Oxford: Blackwell, 1993).

¹⁴ *Ibid.*

health professionals must take into consideration to lead to ethical acts regardless of what those acts are.¹⁵

So, the four principles have their basis in earlier normative theories, specifically, in the Hippocratic theory of non-maleficence, the principles of justice and equality have their roots in Aristotelian ethics which promotes the concepts of equality and equality, showing the necessity of the existence of a rule of law as a main concern the protection of all citizens and at the same time the fulfillment of obligations and the defense of their rights. Finally, the principle of autonomy derives from the Kantian theory which commands that man should be considered the end and not the means.¹⁶

In their book “The Principles of Biomedical Ethics,” Beauchamp and Childress consider that Aristoteles’ virtue theory supports their approach since every major virtue (e.g. wisdom, courage, justice, temperance, etc.) corresponds to one of the fundamental principles they propose.¹⁷ So, they succeeded in creating a Code of Medical Ethics, on which medical officers rely in the performance of their duties summarizing the four principles of ethics in health care and research: autonomy, principle of non-harm, benevolence, and justice. Since then, every medical procedure must be guided by these basic principles, as this is the only way to ensure the protection of the rights of the patient – subject to any arbitrariness.¹⁸

On this basis, it is obvious that Beauchamp and Childress have considered the main problems that arise in cases such as compulsory vaccination, which is the case in point in this article. These problems are the initial consent of the patient after adequate information is provided.¹⁹ It is worth remembering here the propaganda that took place around the vaccination on social media, the versatility and changes in State decisions that had to be formed during the crisis, and the medical uncertainty. Vaccination has sparked ethnic divisions, a situation that would in no way help vulnerable social groups such as allergy sufferers, patients with underlying diseases, pregnant women, and children, to decide whether to take a risk by getting a controversial vaccine. Another important problem that arose was the ratio of risk to the benefit of the patient as well as whether the mandatory obligation of vaccination

¹⁵ Ibid.

¹⁶ Edmund D. Pellegrino et al., “Relevance and Utility of Courses in Medical Ethics: A Survey of Physicians’ Perceptions,” *JAMA* 253, no 1 (1985): 49-53.

¹⁷ Beauchamp and Childress, 57-112.

¹⁸ Ibid.

¹⁹ Ibid.

should be universal without exceptions or even groups of doctors who in practice and prudently would advise vulnerable and sensitive groups on what to decide.²⁰

Childress and Beauchamp's four basic principles should be a set of ethical considerations on which rules can be applied to act as guides in any clinical practice. They, therefore, function as an informal code of conduct and guide researchers and physicians in difficult situations, although apparently in the case of vaccination, they seemed inadequate.²¹ At this point, the challenges identified by us to the four basic bioethical principles, as they were observed in the current health treaty, must be highlighted. Regarding the principle of benefit, the achievement of collective benefit over individual benefit was attempted as a priority. This decision can be described as partially justified in an emergency health condition, but it is understood that its application in practice also created justifiable concerns. The principles of fairness and equity will be considered collectively. In the first vaccination phase, a universal vaccination was proposed with priority given to vulnerable population groups. The nature of the health emergency combined with the lack of an already existing preparation to deal with the virus (vaccine) did not allow simultaneous, vertical vaccination of the entire population, so the principle of probity and parity was challenged in the field. Of course, if such a thing were to happen, it seems certain that there would again be a question of questioning the principle of autonomy, since a decision to vertically inoculate the entire population would deprive individuals of the right of free choice themselves. This, after all, is the issue that concerns our article, especially regarding the social exclusion of people who were not vaccinated following medical instructions.

Perhaps because for Beauchamp and Childress these four principles function not as empirical rules or absolute precepts but as *prima facie* which makes them binding unless they conflict with obligations arising from other moral principles, in our case theory of Kant and utilitarianism.²² The model of the theory of basic principles approaches moral problems deductively, that is, it starts from the general theoretical principle, and then a specialized answer is produced, that is, from an abstract framework, the theory is transferred to specific cases.²³

²⁰ Ibid.

²¹ Corrado Viafora, "Toward a Methodology for the Ethical Analysis of Clinical Practice," *Medicine, Health Care and Philosophy* 2, no. 3 (1999): 283-297.

²² Beauchamp and Childress, 57-112.

²³ Mark G. Kuczewski, "Ethics in Long-term Care: Are the Principles Different?" *Theoretical Medicine and Bioethics* 20 (1990): 15-29.

This way, in our case study, even if the patient will not feel insecure, will be sure of the intentions of those in charge, and will trust them if he has ruled out the possibility of medical negligence, exploitation, or manipulation, it is uncertain whether there would be any room for autonomy, because of the strict measures of government. The most important moral of the doctor's priority is the good of the patient. In any case, we recognize the individual's right to free choice regarding medical recommendations in matters that concern him, regardless of the medical practitioner's ethical obligation. As an argument, we can mention the possibility of seeking a second opinion on the medical issues that concern the person.

In modern society, where human rights are undisputable for all individuals,²⁴ deprivation of personal liberty is a moral problem, which is contrary to the fundamental right of autonomy and self-disposition. Moreover, the contingency of a pandemic in advance sets new, pressing time limits in the planning of its management, in the time, and in the way of the implementation of the business plans, in the field. The lack of time to ensure any conditions aimed at protecting the rights of individuals in the event of a pandemic is often treated as a luxury by the decision-makers. Such policies that do not consider exceptions for health reasons to mandatory measures of public health are ethically unacceptable since it leads to the instrumentalization of individuals. In addition, utilitarianism combined with the community's management perspective of a pandemic, to ensure the health of as much of the population as possible, sets priorities different from those in a normal period. It is typically stated that in the case of 19 patients treated with covid-19, the condition of their informed consent for the way of their treatment ceases to be considered a priority for the medical officer, due to the rapid deterioration of the clinical picture of the patient. Many times, it is impossible in the minimum time left to keep the patient alive, to inform in detail his relatives to choose his mechanical support or not.²⁵ Therefore, in this case, the basic principle of auton-

²⁴ Myrto Dragana-Monachou, "Ethics and Bioethics," *Science and Society* 8 (2015): 1-26 [in Greek].

²⁵ During the first wave of the COVID-19 pandemic, the statements of the medical staff in reference to hospitals around the world were typical, where they mentioned the difficulty in managing not only the disease but also the accompanying conditions that it caused. Because of the isolation of patients to ensure the lack of spread of the virus and the quarantine imposed on the entire population, doctors ultimately became the patients' relatives and were burdened with the burden of choice for the patients they were responsible for. In many cases, the doctors were the ones who decided for their patients, when they could not choose for themselves, and their relatives did not have the time to be informed in detail and to consent.

omy acquires new dimensions in the applied form of Medical Ethics. The same can be said for the case of vaccines to manage the spread of COVID-19, from the generalization of this image. The point we want to make is that every healthy person, in every society, could be characterized as a potential patient of COVID-19, and time, in that case, is not an ally especially when emergency management involves a potentially deadly and dangerous virus that spread of which you need to stop early. For this reason, every government in the developed world has decided to vaccinate its entire adult population, except for certain categories of citizens facing health issues to protect against the effects of a virus infection, especially during the first wave of its spread. In this endeavor, the criteria were utilitarian and communal. In other words, they were subject to utilitarian and community medical ethics, seeking the greatest possible benefit for the maximum possible number of individuals. In this view, there is a percentage of people who for various reasons, mainly health, despite the suggestions, cannot fall into the category of vaccinated due to health recommendations.

In this context, it becomes obvious that the pandemic forced vulnerable groups to be vaccinated against the will on the altar of public health, to avoid social exclusion. These vulnerable groups were made up of people who had to decide and choose between social exclusion and their health. Appropriate information regarding their special needs was non-existent and in other cases controversial and resulted in panic as people were called upon to risk their well-being to ensure the common good. Thus, these individuals found themselves in the difficult position of trying to coexist in a society with restrictive conditions against them for something that was not their responsibility, at least until the medical verdict on the safety of vaccines was issued by the medical community. The psyche of these people and their relatives was tested during a period of intense stress, for each person, with the onset of a pandemic. It is therefore a fact that any attempt to “psychologically force” citizens in this direction can only oppress the individual and deprive him of his sense of freedom and autonomy, despite any utilitarian motives, for the same or for the community in which he lives. Undoubtedly such a policy is a major bioethical issue as these individuals found themselves in the difficult position of trying to coexist in a society with restrictive conditions against them for something that was essentially not their responsibility, at least until the medical verdict on it vaccine safety from the medical community. They were excluded from activities that took place mainly indoors, and it was recommended that they be examined several times a week at their own expense,

to remove these restrictions and allow them to participate in these activities.

The shift of responsibility from the doctor to the “potential patient” from COVID-19, with legally secured and informed consent, has turned the “patient” from a passive recipient of treatment to a key therapeutic decision-maker. This institution, though of a purely protective character, not only raises moral issues since involves forced treatment against his will, the risk to his health, and stigmatization with consequences for his subsequent life, but also several legal, economic, and social consequences, such as cessation of his professional activity, fines, and deprivation of his freedom of movement.

However, the moral justification of the above acts was based on the theory of utilitarianism and Kantian ethics. According to the theory of utilitarianism, a person is moral to be temporarily deprived of his liberty and to receive compulsory treatment because this ensures his health, his life, and his physical safety integrity, but also the security and well-being of society as a whole.²⁶ Moreover, Utilitarianism is “radically impartial and egalitarian as it treats every person equally by considering their well-being equal to anyone else’s.”²⁷ In Kantian ethics, everything that is allowed to be applied must be able to be universal. For Kant, however, what matters is not the result – in our case the damage to the health of a healthy patient through vaccination – but the fulfillment of the moral duty. That is why the rules sought by the ethics of duty are rigid, coercive, and without exceptions.

It seems, therefore, that both the ethics of duty and the ethics of consequences face serious problems in their application in cases such as that of compulsory vaccination. So, there are practical dilemmas that arise in the field of health. As a result, we must turn to alternative ethical theories to seek answers but also identify the “right decisions,” as well as a moral way of thinking and dealing with modern dilemmas that arise in the field of health²⁸, accepting that “often answers to ethical questions are not black and white but may depend on the particular circumstances.”²⁹ Turning to the most modern moral theories does not

²⁶ Theodosios Pelegrinis, *Medical Ethics* (Athens: Ellinika Grammata, 2009), 34-56 [in Greek].

²⁷ Julian Savulescu and Evangelos D. Protopapadakis, “‘Ethical Minefields’ and the Voice of Common Sense: A Discussion with Julian Savulescu,” *Conatus - Journal of Philosophy* 4, no. 1 (2019): 125-133.

²⁸ Ioannis Poulis and Eugenia Vlachou, *Bioethics: Ethics and Law in Health Sciences* (Athens: Konstandaras, 2016), 90-110 [in Greek].

²⁹ Roberto Andorno and George Boutlas, “Global Bioethics in the Post-Coronavirus Era: A Discussion with Roberto Andorno,” *Conatus - Journal of Philosophy* 7, no. 1 (2022): 185-200.

mean a definite departure from the classical but on the contrary more effective use of classical concepts.³⁰

Consequently, we are, in the first place, called to go back to our roots and redefine concepts such as what is virtue. Apart from this, the basic principles of Medical Ethics should be a priority for those involved in managing issues of a medical nature, whether they occur during periods of regularity or periods of emergency. Furthermore, those responsible for the design of health protocols are called upon to try to maintain a balance in their methodological tools from existing ethical theories, with priority given to the protection of all human rights in times of emergency health conditions. And here the irrationality of human nature becomes evident, since often not only is the cooperation of moral and social law difficult but even fundamental human rights such as that of autonomy are circumvented. A compulsory vaccination violates this fundamental right. So, in corresponding emergency scenarios, there should be state care to ensure not only life but also the protection of human rights.

Finally, what we ought to be dealing with as ethical philosophers is whether an ethical theory can ultimately violate the guaranteed rights of a human being. In addition, we must propose a more meticulous approach, a “relativistic or moderate utilitarianism” which will be used in similar cases so that there is balance, justice, and equity. After all, do the general ethical principles represent the basis for the formulation, critique, and interpretation of specific rules, thus solving difficult or new problems that the rules cannot solve?

To clarify the moral conflict under study, we strongly believe that except from examining the core bioethical theories that compile the moral context into which the conflict falls, it is important to identify, examine, deepen, and analyze important factors involved in it throughout a specific case study. On this basis, we chose the case of Greece and analyzed important aspects of this conflict focusing on the core issues related to vaccination hesitancy during the COVID-19 era. In this manner, we highlight other important reasons for treating the vaccine with suspicion and not only the reasons concerning people who for health reasons hesitate to be vaccinated. In this way, the general context into which the dilemma under consideration is presented is highlighted. The description of this context contributes to a better understanding of the dilemma itself, presenting other reasons that discourage a person who belongs to a special category

³⁰ Ibid.

from being vaccinated, arising from empirical data, from practice, and enhancing our approach to the subject. Moreover, through the next chapter, we highlight that the hasty actions of the government and the absence of extensive information about vaccination led to many ethical dilemmas, uncertainty, and vaccination hesitancy from individuals who either fall into special categories or do not. Thus, we further elucidate the reasons why individuals hesitate to vaccinate, shedding more light on important aspects of the dilemma under consideration.

III. Vaccination hesitancy: The case of Greece

The purpose of this chapter is to systematically review the issues related to vaccination hesitancy during the COVID-19 era, across diverse contexts and try to conclude the case of Greece. We aim to deepen and analyze the reasons Greek people hesitated to vaccinate. A review of formal, as well as grey literature, was conducted to set light on issues of public trust, the role of social media, and hesitancy concerning the COVID-19 vaccine. For this chapter, we examined the literature of previous years, related not only to COVID-19. We drew from evaluation studies based mainly in the USA that focused also on vaccination hesitancy of influenza, HPV, and childhood vaccines. Our research method was searched in electronic databases by typing the keywords “vaccine hesitancy,” and “vaccination hesitancy and the web.” We focused our research not only on medical academic papers but also on grey literature since we feel that a large proportion of people also accessed such literature and were influenced by such documents.

Vaccination hesitancy is a complex, multi-faceted phenomenon that dates to the first vaccinations performed by Dr. Zabdiel Boylston (1721) and Edward Jenner (1796-1798). Its complexity comes from its nature since it is context-dependent and vaccine-specific.³¹ Jarrett et al.³² define vaccination hesitancy as a “dynamic and challenging period around accepting a vaccination.” In a similar vein WHO (World Health Organization) defined vaccine hesitancy during the COVID-19 period as a behavior, affected by several factors in conjunction with issues of confidence (do not trust vaccine or provider), complacency (do not perceive a need for a vaccine, do not value the vaccine), and

³¹ Shuster, 974-977.

³² Caitlin Jarrett et al., “Strategies for Addressing Vaccine Hesitancy – A Systematic Review,” *Vaccine* 33, no. 34 (2015): 4180-4190.

convenience (access). Based on the literature,³³ vaccine-hesitant individuals are a heterogeneous group who hold varying levels of uncertainty about specific vaccines or vaccination in general. It is also argued by WHO that vaccine-hesitant individuals may accept all vaccines but remain concerned about vaccines, some may refuse or delay some vaccines but are willing to do others; some might reject all vaccines. Here we feel we should point at a gap we found in literature as well as in practices in Greece. People who were advised by their private doctors not to vaccinate, due to other chronic health problems, were not regarded and were not at all given special accommodations. The role of medical staff and doctors concerning their attitude toward vaccination is also highlighted in many studies,³⁴ and is portrayed as a crucial one for vaccine-hesitant individuals.

The results of our search of the literature and grey literature resulted that a high percentage of studies worldwide show that several factors influenced acceptance or refusal (ethnicity, working status, religiosity, politics, gender, age, education, income, etc.). Additional to those that WHO proposed. The most given reasons to refuse a vaccine were: being against vaccines in general, worries about personal safety considering that a vaccine produced in such a short time is potentially too dangerous, considering the vaccine useless because of the harmless nature of COVID-19, general lack of trust on the governmental decision, doubts about the efficiency of the vaccine, feelings that they are already immunized, feeling that they are experimented on. We feel that although primary research has not been yet done in the Greek context those reasons that international literature concludes on is a valuable starting point for future research in the Greek context.

Another major factor that we feel contributed to vaccination hesitancy worldwide and in Greece in particular is the internet and social media. The pervasive diffusion of the Internet is an undeniable characteristic of our day and age. While Web 1.0 was static, Web 2.0 and its evolution has made people capable of producing as well as consuming

³³ Kendall Pogue et al., "Influences on Attitudes Regarding Potential COVID-19 Vaccination in the United States," *Vaccines* 8, no. 4 (2020): 582; Gul Salali Deniz and Mete Sefa Uysal, "COVID-19 Vaccine Hesitancy is Associated with Beliefs on the Origin of the Novel Coronavirus in the UK and Turkey," *Psychological Medicine* 52, no. 15 (2020): 3750-3752; Jeremy K. Ward et al., "The French Public's Attitudes to a Future COVID-19 Vaccine: The Politicization of a Public Health Issue," *Social Science & Medicine* 265 (2020): 113-114.

³⁴ Dewesh Kumar et al., "Vaccine Hesitancy: Understanding Better to Address Better," *Israel Journal of Health Policy Research* 5, no. 1 (2016): 1-8; Robert M. Jacobson et al., "Vaccine Hesitancy," *Mayo Clinic Proceedings* 90, no. 11 (2015): 1562-1568; Roberto Gasparini et al., "The 'Urban Myth' of the Association between Neurological Disorders and Vaccinations," *Journal of Preventive Medicine and Hygiene* 56, no. 1 (2015): 2-5.

information.³⁵ This blurring of distance and differences between consumer and producer has drastic effects on the medical field too.³⁶ It has been observed for several years now³⁷ that patients or patients' families proactively search the Internet for medical information. It has also been noted³⁸ to question or even surpass doctors and their advice. In this way, it is argued that expertise is redefined and questioned on one hand, whilst patients are put in the center of health procedures and involved in and informed during the steps of health decisions. In terms of COVID-19 vaccination, we feel that the Web acted as a modern Pandora's box. Several studies³⁹ have shown that several critical pages and websites introducing anti-vaccination information despite being of low quality are highly ranked thus search engines propose them and are often returned. Officials and official information have tried to increase their presence in sites in favor of vaccination however their influence has been proven to lower since other hoaxing sites appeared first, were more visited, had more comment tags, and thus were more read. This in turn resulted in creating communities that expressed doubts and concerns about vaccine safety.⁴⁰

These findings in combination with the aforementioned news find-me attitude⁴¹ high levels of conspiracy attitude and dependence on

³⁵ Anna Kata, "Anti-vaccine Activists, Web 2.0, and the Postmodern Paradigm – An Overview of Tactics and Tropes Used Online by the Anti-vaccination Movement," *Vaccine* 30, no. 25 (2012): 3778-3789; Alma G. Ochoa, *Content Attributes of Vaccine Promotion Websites as Compared to Claims Made by Anti-vaccine Groups* (PhD diss., The University of Texas School of Public Health, 2015), 4-6.

³⁶ Gabriele Sak et al., "Comparing the Quality of Pro- and Anti-vaccination Online Information: A Content Analysis of Vaccination-related Webpages," *BMC Public Health* 16, no. 38 (2015): 1-12.

³⁷ Jennifer Keelan et al., "YouTube as a Source of Information on Immunization: A Content Analysis," *JAMA* 298, no. 21 (2007): 2482-2484.

³⁸ Emily A. Holmes et al., "Multidisciplinary Research Priorities for the COVID-19 Pandemic: A Call for Action for Mental Health Science," *The Lancet Psychiatry* 7, no. 6 (2020): 547-560.

³⁹ Paul Davies et al., "Antivaccination Activists on the World Wide Web," *Archives of Disease in Childhood* 87, no. 1 (2002): 22-25; Selim Öncel and Müge Alvur, "How Reliable Is the Internet for Caregivers on Their Decision to Vaccinate Their Child against Influenza? Results from Googling in Two Languages," *European Journal of Pediatrics* 172, no. 3 (2013): 401-404; Diego Pineda and Martin G. Myers, "Finding Reliable Information about Vaccines," *Pediatrics* 127, no. 1 (2011): 134-137; Noni E. MacDonald, "Vaccine Hesitancy: Definition, Scope, and Determinants," *Vaccine* 33, no. 34 (2015): 4161-4164.

⁴⁰ Daniel Capurro et al., "The Use of Social Networking Sites for Public Health Practice and Research: A Systematic Review," *Journal of Medical Internet Research* 16, no. 3 (2014): 79; Anne S. Moorhead et al., "A New Dimension of Health Care: Systematic Review of the Uses, Benefits, and Limitations of Social Media for Health Communication," *Journal of Medical Internet Research* 15, no. 4 (2013): 85.

⁴¹ Karl Vance et al., "Social Internet Sites as a Source of Public Health Information," *Dermatologic Clinics* 27, no. 2 (2009): 133-136.

social media groups should be examined and taken into consideration since it is noted to strongly attenuate the relationship between vaccination hesitancy and the Web. Previous research⁴² on vaccination hesitancy before the COVID-19 vaccine proved that Facebook and Twitter were the favorite platforms for anti-vaxxers and that this trend has expanded to other platforms too.⁴³ A special category of vaccine-hesitant groups that research pinpoints emerged during the COVID-19 era and is important to address is news avoiders. This term is used to define people that think the news find them. Their anxiety does not allow them to do their research or get informed by the media. They rely on the people they meet or are affected by to inform them and tend to adopt the opinions of their expert peers. These two newly emerged groups (news find and news avoiders) along with social media, platforms, and the media generally were ways different government officials took or should take into consideration in similar cases and find ways to endorse to reach their goals.

An effective strategy research results put forward⁴⁴ as the most important way of ensuring vaccination is to present to community members the convincing evidence that the SARS-CoV-2 vaccine or future vaccines in similar health crises, has been rigorously tested, shown to be effective, and is not perceived as being rushed into production. Unfortunately, the vaccine production programs were also unsuccessfully named. For instance, the US vaccination program was called “Operation Warp Speed.” This strengthened mistrust of health authorities which as we presented is an important deterrent to vaccination uptake.⁴⁵ The final point this part wishes to examine about vaccination hesitancy and the case of Greece is moral or religious convictions and social responsibility. We intentionally left this part last since research has proven that philosophical beliefs and moral convictions regard-

⁴² Eve Dubé et al., “Mapping Vaccine Hesitancy – Country-specific Characteristics of a Global Phenomenon,” *Vaccine* 32, no. 49 (2014): 6649-6654; Gustavo S. Mesch and Kent P. Schwirian, “Social and Political Determinants of Vaccine Hesitancy: Lessons Learned from the H1N1 Pandemic of 2009-2010,” *American Journal of Infection Control* 43, no. 11 (2015): 1161-1165; Sarah Lane et al., “Vaccine Hesitancy around the Globe: Analysis of Three Years of WHO/UNICEF Joint Reporting Form Data 2015-2017,” *Vaccine* 36, no. 26 (2018): 3861-3867.

⁴³ Beth L. Hoffman et al., “The Emerging Landscape of Anti-Vaccination Sentiment on Facebook,” *Journal of Adolescent Health* 64, no. 2 (2019): 136; David A. Broniatowski et al., “Weaponized Health Communication: Twitter Bots and Russian Trolls Amplify the Vaccine Debate,” *American Journal of Public Health* 108, no. 10 (2018): 1378-1384.

⁴⁴ Kata, 3778-3789.

⁴⁵ Steven Taylor et al., “A Proactive Approach for Managing COVID-19: The Importance of Understanding the Motivational Roots of Vaccination Hesitancy for SARS-CoV-2,” *Frontiers in Psychology* 11 (2020): 57-59.

ing health and vaccination play a part in receiving a vaccination and we feel that in our case it is worth mentioning and examining in detail. Opposition and hesitancy because vaccination is not congruent with religious considerations and the true seek for a cure has been a long-standing debate in Greece that was inflated in the COVID-19 era. Although the first measure the Greek government impose was social distancing church and religious groups insisted on in-person meetings and praying. Finally, the church adhered to governmental instructions. We mentioned this example at this point aiming at showing how multi-faced individual decision-making regarding vaccinations is. It involves emotional, socio-cultural, and political factors as well as cognitive ones.

In concluding this chapter, we strongly suggest further research in Greece to be conducted taking into consideration not only the different reasons people worldwide hesitated to receive vaccination, but also the Web and the different social and religious conceptions but also focusing on the different needs and accommodations different groups have. Policies that fail to take these factors into careful consideration will not yield the aimed results.

IV. The suggested solution: “A moderate utilitarianism” as the golden mean between the mandatory and the optional character of vaccination

The Greek government has implemented a series of mandatory measures to prevent the spread of coronavirus with the most important but also ambiguous the compulsory vaccination against COVID-19. Although this tactic is applied in emergencies and, in this manner, is supported by a significant part of the Greek community, several Greek people are faced with a serious ethical conflict as they must decide whether to get vaccinated, to avoid social exclusion by endangering their health or whether to abstain from vaccination and at the same time from a significant number of social activities. In other words, they must choose between consent to which there is a serious risk to their health and refusal that implies social exclusion.

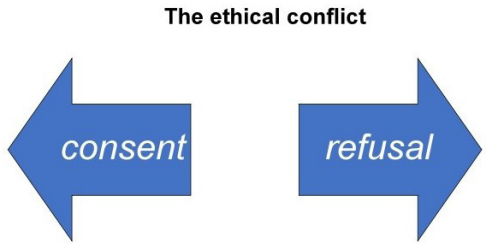


Figure 1: The ethical conflict

In this context, various questions arose, such as: How ethical can be considered an imposition of this kind that significantly reduces the freedom of will according to an issue that directly concerns every single person? What ethical context could provide a solution to this conflict? What measure could the Greek government take so vulnerable people are not called upon to face the above-mentioned moral dilemma? To answer these questions, we will study the ethical conflict firstly in the context of the principles of the Hippocratic oath and secondly in the context of the theory of Utilitarianism to check whether one of these two ethical frameworks can provide us with a satisfactory solution to this conflict and conclude on what the indicative ethical choice is.

According to the Oath of Hippocrates, doctors should apply the treatments to help but never harm patients. Moreover, doctors should not give a deadly drug to anybody even if he asks for it, nor they will suggest anybody take such a drug.⁴⁶ On this basis, if a person has a health problem, such as a serious allergy or a serious autoimmune disease (e.g. pemphigus), and the vaccination, according to his doctor, seems a risky choice that can harm or cause intentional damage to him, the indicative choice for this person according to the Hippocratic Oath is to avoid the vaccination against COVID-19 (figure 2). This choice can prioritize and protect the health of this person but, at the same time, the strict measures implemented by the Greek government condemn him to unwanted isolation and exclusion from a wide range of activities. For example, one strict measure that applied in Greece was the mandatory vaccination of all the medical and nursing staff. If somebody did not confront this measure he will be removed from his job and forced to do secretarial duties. Moreover, every unvaccinated person had to do two rapid tests a week and bear the cost, to be allowed to enter his workplace. Another rigorous measure implemented by the Greek government was the compulsory vaccination of all citizens aged 60 and over. Non-discipline in this measure, in addition to their social exclusion, also resulted in the payment of a fine of one hundred euros per month. Finally, unvaccinated citizens were forbidden to enter shops, cafes, and restaurants.⁴⁷ It is obvious that if a person avoided the vaccination for health reasons, he had to accept his social exclusion and, in some cases, economic penalties. Although the purpose of the implementation of these measures was the protection

⁴⁶ Lipourlis, 79-94.

⁴⁷ Government Gazette, "Emergency Measures for the Protection of Public Health from the Risk of further Spread of the Coronavirus SARS-CoV-2 throughout the Territory for the Period from Thursday, March 4, 2021," Δ1α/Γ.Π.οικ. 18877/2021 – ΦΕΚ Β' 1194/27.03.2021.

of the health of Greek citizens, it is observed that there was no provision for a possible exemption from vaccination of certain population groups that are forced to abstain from it for health reasons, resulting in their social exclusion. Thus, the moral principles of the Hippocratic Oath do not seem to help the individual to face this moral conflict, thus, they do not provide a solution to this specific problem.

On the other hand, utilitarianism prioritizes the benefit of the community. In this context, all citizens with no exceptions should be vaccinated to achieve “herd immunity.” On this basis, the acceptance of the theory of utilitarianism that seeks the greatest possible benefit for the maximum possible number of individuals leads to the compulsion of vulnerable groups to be vaccinated against the will on the altar of public health. On this basis, the vulnerable people would avoid social exclusion, but they will face serious health risks (figure 2). In this context, several questions arose concerning how ethical could be considered such a tactic, as it significantly reduces the freedom of will according to an issue that directly concerns every single person but also encroaches on the principles of autonomy and non-harm. Thus, neither the Oath of Hippocrates nor the theory of Utilitarianism seems to provide a favorable, ideal, or satisfactory solution for a person facing this dilemma, a fact that highlights the existence of significant gaps in the research of this issue and the need to implement specific measures considering these groups of people by the Greek government.



Figure 2: The indicative choice according to the Hippocratic Oath and Utilitarianism.

As these two theories cannot provide a solution to the conflict between social exclusion and health risks that vulnerable groups in Greece faced, a core question arose: Is there an indicative ethical choice?

Our approach’s starting point is a basic principle of the modern version of the Hippocratic Oath according to which a doctor is committed to applying all measures which are required for the benefit of the

patient, avoiding those “twin traps” of overtreatment and therapeutic nihilism.⁴⁸ We can trace a similarity between this modern Hippocratic principle and Aristotle’s *Golden Mean* theory. Specifically, the concept of “twin traps,” which are overtreatment and therapeutic nihilism, reminds the two “extremes” in Aristotle’s theory, that is *excess* and *deficiency*. According to Aristotle, virtue is the midpoint between two extremes which he also called *vices*, and, in our case, corresponds to the twin traps of optional and mandatory vaccination without exceptions.⁴⁹ Thus, Aristotle 2.500 years ago suggested this basic principle of the golden mean, the moderation or striving for a balance between extremes, *deficiency*, and *excess*.⁵⁰ As we can observe in Figures 3 and 4 the optional vaccination could be considered as the one extreme (deficiency), and the mandatory vaccination as the other vice (excess).

The starting point of our argument :
The golden mean :
a balance point between therapeutic nihilism and overtreatment

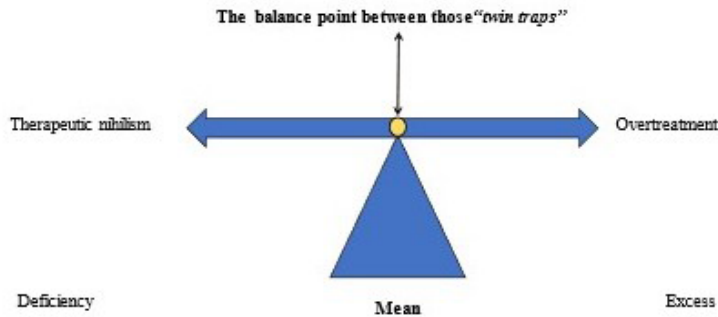


Figure 3: A balance point between therapeutic nihilism and overtreatment.

⁴⁸ Marks.

⁴⁹ Aristotle, *Nicomachean Ethics* II, trans. Dimitrios Lipourlis (Thessaloniki: Zitros, 2006), 1106b 27-1107a 8; Richard Kraut, “Aristotle’s Ethics,” *The Stanford Encyclopedia of Philosophy* (Fall 2022 edition), eds. Edward N. Zalta and Uri Nodelman, <https://plato.stanford.edu/archives/fall2022/entries/aristotle-ethics/>; Marks; John Rivera, “Finding Aristotle’s Golden Mean: Social Justice and Academic Excellence,” *The Journal of Education* 186, no. (2005): 79-85; Yuetong Zhou, “Aristotle’s Golden Mean: Vague and Inapplicable?” in *Proceedings of the 2nd International Conference on Language, Art and Cultural Exchange*, eds. H. Ma, N. W. Lam, M. Ganapathy, and K. Tarigan, 1-5 (Amsterdam and Paris: Atlantis Press, 2021): 1.

⁵⁰ Aristotle, 1106b 27-1107a 8; Kraut; Marks; Rivera.

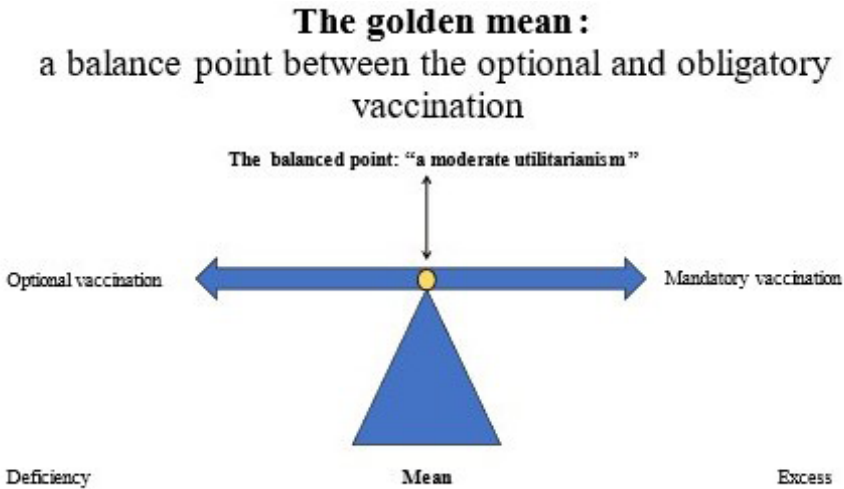


Figure 4: A balance point between the optional and obligatory vaccination against COVID-19: a moderate Utilitarianism.

Therefore, an attempt to break this contemporary deadlock arises from Aristotle's Golden Mean theory. Specifically, we conclude that the optimal solution and simultaneously the indicative ethical choice can emerge from "a moderate utilitarianism" which is suggested as the golden mean, as the moderation between the mandatory (exaggeration) and the optional character of the vaccination (lack). This kind of balanced ethical approach that does not accentuate disparities within and among different groups could ensure health equality, better social resilience, and commitment to effective prospective preparedness, which can also be used in similar cases so that there is balance, justice, and equity.

But how could "moderate utilitarianism" contribute to breaking this deadlock? Moderate utilitarianism should be the basis for the government to formulate and apply specific measures against the pandemic, even if there is no time to waste. Specifically, in the case under investigation, the Greek government could encourage vaccination and possibly make it mandatory for the healthy population, considering, at the same time, significant groups of the population that necessarily abstain from vaccination. Competent services of the Ministry of Health of Greece could clearly define specific categories of the population that, after medical tests proving the existing health risk, can receive a certificate of exemption from vaccination. In this manner, this measure not only will ensure safeguards and equal operations for all citizens, based on medical ethics and self-disposition principles but also could contribute to the release of these vulnerable groups from this moral conflict they encountered.

V. Conclusions

Medical Ethics and its rules coexist in human society and are shaped by those in force in it. Any social change has an impact on how Medical Ethics is perceived and ultimately applied. A typical and most recent example of this is the COVID-19 pandemic, which plagues the planet from the end of 2020 until today. Naturally, a dynamic condition, as considered by definition a pandemic, has the potential to change the way of thinking of any society, the political and strategic planning that deals with its management, and those branches that are involved with it, especially the field of Medicine.

Principles that until then were considered inviolable in Medicine, such as the basic principles of Medical Ethics mentioned above, are returning as topics of discussion on a new basis. The contingency of a pandemic in advance sets new, pressing time limits in the planning of its management, in the time, and in the way of the implementation of the business plans, in the field.

For this reason, we express the belief that the pandemic of COVID-19 despite its tough face and what it has caused worldwide and continues to cause as it has not yet been eradicated, is a unique opportunity for the medical world; a unique opportunity to modernize health protocols in the light of the basic principles of Medical Ethics and philosophical ethical theories concerning the individual and the protection of his rights, not exclusively as a unit but as a member of human society. The starting point for our discussion is that such a disadvantage has been amplified during the COVID-19 pandemic, in a pattern that is particularly pronounced among sensitive minoritized groups. When social processes put large groups of persons under systematic threat of domination or deprivation of the means to develop and exercise their capacities, at the same time that these processes enable others to dominate or to have a wide range of opportunities for developing and exercising capacities available to them. Structural injustice is a kind of moral wrong distinct from the wrongful action of an individual agent or the repressive policies of a state. Too often we tend to see the health inequalities ingrained in our societies as a failure of the system. To recognize the demands of equality, we have to see that in many ways, the structures are working exactly in the ways they are meant to or to develop ones that cater to all needs. The effects of COVID-19 and the exacerbation of inequalities in health provisions are not in fact outliers. We feel that the system operated just as it was built to.

COVID-19 has once again laid bare the inequalities embedded in the very structures of our societies, in our healthcare and public health systems, social policies, and institutions. Understanding and resolving such inequalities requires a recognition of their structural nature. We

have explored one such aspect of inequality. A renewed call to attend to health inequalities is to be recognized not as an aberration but as a conventional feature of our current social order, one that is based on moderation, that we will be able to address what remains of the deepest forms of health and social equality.

References

Andorno, Roberto, and George Boutlas. "Global Bioethics in the Post-Coronavirus Era: A Discussion with Roberto Andorno." *Conatus - Journal of Philosophy* 7, no. 1 (2022): 185-200.

Aristotle. *Nicomachean Ethics* II. Translated by Dimitris Lipourlis. Thessaloniki: Zitros, 2006 [in Greek].

Beauchamp, Tom L., and James F. Childress. *Principles of Biomedical Ethics*. Oxford: Oxford University Press, 2001.

Bilanakis, Nikos. *Psychiatric Treatment and Human Rights in Greece*. Athens: Odysseas, 2004 [in Greek].

Broniatowski, David A., Amelia M. Jamison, SiHua Qi, Lulwah AlKulaib, Tao Chen, Adrian Benton, Sandra C. Quinn, and Mark Dredze. "Weaponized Health Communication: Twitter Bots and Russian Trolls Amplify the Vaccine Debate." *American Journal of Public Health* 108, no. 10 (2018): 1378-1384.

Capurro, Daniel, Kate Cole, Maria I. Echavarría, Jonathan Joe, Tina Neogi, and Anne M. Turner. "The Use of Social Networking Sites for Public Health Practice and Research: A Systematic Review." *Journal of Medical Internet Research* 16, no. 3 (2014): 79.

Davies, Paul, Simon Chapman, and Julie Leask. "Antivaccination Activists on the World Wide Web." *Archives of Disease in Childhood* 87, no. 1 (2002): 22-25.

Dragona-Monachou, Myrto. "Ethics and Bioethics." *Science and Society* 8 (2015): 1-26 [in Greek].

Dubé, Eve, Dominique Gagnon, Emily Nickels, Stanley Jeram, and Melanie Schuster. "Mapping Vaccine Hesitancy – Country-specific Characteristics of a Global Phenomenon." *Vaccine* 32, no. 49 (2014): 6649-6654.

Gasparini, Roberto, Donatella Panatto, Piero Luigi Lai, and Daniela Amicizia. "The 'Urban Myth' of the Association between Neurological Disorders and Vaccinations." *Journal of Preventive Medicine and Hygiene* 56, no. 1 (2015): 1-8.

Goffi, Emmanuel Roberto. "Back to Eudaimonia as a Social Relation: What Does the Covid Crisis Teach Us about Individualism and Its Limits?" *Conatus - Journal of Philosophy* 7, no. 2 (2022): 105-118.

Government Gazette. "Emergency Measures for the Protection of Public Health from the Risk of further Spread of the Coronavirus SARS-CoV-2 throughout the Territory for the Period from Thursday, March 4, 2021." Δ1α/Γ.Π.οικ. 18877/2021 – ΦΕΚ Β' 1194/27.03.2021.

Hoffman, Beth L., Elizabeth M. Felter, Kar-Hai Chu, Ariel Shensa, Daria Williams, Rachel Himmel, Riley Wolynn, Chad Hermann, Todd Wolynn, and Brian A. Primack. "The Emerging Landscape of Anti-vaccination Sentiment on Facebook." *Journal of Adolescent Health* 64, no. 2 (2019): 95-140.

Holmes, Emily A., Rory C. O'Connor, Hugh Perry, Irene Tracey, Simon Wessely, Louise Arseneault, Clive Ballard, Helen Christensen, Roxane Cohen Silver, Ian Everall, Tamsin Ford, Ann John, Thomas Kabir, Kate King, Ira Madan, Susan Michie, Andrew K Przybylski, Roz Shafran, Angela Sweeney, Carol M Worthman, Lucy Yardley, Katherine Cowan, Claire Cope, Matthew Hotopf, and Ed Bullmore. "Multidisciplinary Research Priorities for the COVID-19 Pandemic: A Call for Action for Mental Health Science." *The Lancet Psychiatry* 7, no. 6 (2020): 547-560.

Jacobson, Robert M., Jennifer L. St. Sauver, and Lila J. Finney Rutten. "Vaccine Hesitancy." *Mayo Clinic Proceedings* 90, no. 11 (2015): 1562-1568.

Jarrett, Caitlin, Rose Wilson, Maureen O'Leary, Elisabeth Eckersberger, and Heidi J. Larson. "Strategies for Addressing Vaccine Hesitancy – A Systematic Review." *Vaccine* 33, no. 34 (2015): 4180-4190.

Kata, Anna. "Anti-vaccine Activists, Web 2.0, and the Postmodern Paradigm – An Overview of Tactics and Tropes Used Online by the Anti-vaccination Movement." *Vaccine* 30, no. 25 (2012): 3778-3789.

Keelan, Jennifer, Vera Pavri-Garcia, George Tomlinson, and Kumanan Wilson. "YouTube as a Source of Information on Immunization: A Content Analysis." *JAMA* 298, no. 21 (2007): 2482-2484.

Kraut, Richard. "Aristotle's Ethics." *The Stanford Encyclopedia of Philosophy* (Fall 2022 Edition), edited by Edward N. Zalta and Uri Nodelman. <https://plato.stanford.edu/archives/fall2022/entries/aristotle-ethics/>.

Kuczewski, Mark G. "Ethics in Long-term Care: Are the Principles Different?" *Theoretical Medicine and Bioethics* 20 (1990): 15-29.

Kumar, Dewesh, Rahul Chandra, Medha Mathur, Saurabh Samdariya, and Neelesh Kapoor. "Vaccine Hesitancy: Understanding Better to Address Better." *Israel Journal of Health Policy Research* 5, no. 1 (2016): 1-8.

Lane, Sarah, Noni E. MacDonald, Melanie Marti, and Laure Dumolard. "Vaccine Hesitancy around the Globe: Analysis of Three Years of WHO/UNICEF Joint Reporting Form Data 2015-2017." *Vaccine* 36, no. 26 (2018): 3861-3867.

Lipourlis, Dimitrios. *Hippocratic Medicine*. Athens: Epikendro, 1983 [in Greek].

MacDonald, Noni E. "Vaccine Hesitancy: Definition, Scope, and Determinants." *Vaccine* 33, no. 34 (2015): 4161-4164.

Marks, Jay W. "Medical Definition of Hippocratic Oath." https://www.medicinenet.com/hippocratic_oath/definition.htm.

Mesch, Gustavo S., and Kent P. Schwirian. "Social and Political Determinants of Vaccine Hesitancy: Lessons Learned from the H1N1 Pandemic of 2009-2010." *American Journal of Infection Control* 43, no. 11 (2015): 1161-1165.

Moorhead, Anne S., Diane E. Hazlett, Laura Harrison, Jennifer K. Carroll, Anthea Irwin, and Ciska Hoving. "A New Dimension of Health Care: Systematic Review of the Uses, Benefits, and Limitations of Social Media for Health Communication." *Journal of Medical Internet Research* 15, no. 4 (2013): 85.

Morgan, William E. "Hippocrates on Ethical Practice Management." *Journal of Chiropractic Humanities* 11 (2004): 44-48.

Müller-Hill, Benno. *Murderous Science: Elimination by Scientific Selection of Jews, Gypsies, and Others in Germany, 1933-1945*. Translated by George R. Fraser. Oxford: Oxford University Press, 1984.

Ochoa, Alma G. "Content Attributes of Vaccine Promotion Websites as Compared to Claims Made by Anti-vaccine Groups." PhD diss., The University of Texas School of Public Health, 2015.

Öncel, Selim, and Müge Alvur. "How Reliable is the Internet for Caregivers on Their Decision to Vaccinate Their Child against Influenza? Results from Googling in Two Languages." *European Journal of Pediatrics* 172, no. 3 (2013): 401-404.

Paraskevopoulou, Stavroula. "Human Rights and Mental Illness: The Limits of the Freedom of Persons with Mental Illness." *Ethics – Journal of Philosophy* no. 12 (2019): 66-74 [in Greek].

Pelegrinis, Theodosios. *Medical Ethics*. Athens: Ellinika Grammata, 2009 [in Greek].

Pellegrino, Edmund D., Richard J. Hart, Sharon R. Henderson, Stephen E. Loeb, and Gary Edwards. "Relevance and Utility of Courses in Medical Ethics: A Survey of Physicians' Perceptions." *JAMA* 253, no. 1 (1985): 49-53.

Pence, Greg. "Virtue Theory." In *A Companion to Ethics*, edited by Peter Singer, 249-258. Oxford: Blackwell, 1993.

Pineda, Diego, and Martin G. Myers. "Finding Reliable Information about Vaccines." *Pediatrics* 127, no. 1 (2011): 134-137.

Pogue, Kendall, Jamie L. Jensen, Carter K. Stancil, Daniel G. Ferguson, Savvanah J. Hughes, Emily J. Mello, Ryan Burgess, Bradford K. Berges, Abraham Quaye, and Brian D Poole. "Influences on Attitudes Regarding Potential COVID-19 Vaccination in the United States." *Vaccines* 8, no. 4 (2020): 582.

Poulis, Ioannis, and Eugenia Vlachou. *Bioethics: Ethics and Law in Medical Sciences*. Athens: Konstandaras, 2016 [in Greek].

Rivera, John. "Finding Aristotle's Golden Mean: Social Justice and Academic Excellence." *The Journal of Education* 186, no. 1 (2005): 79-85.

Sak, Gabriele, Nicola Diviani, Ahmed Allam, and Peter J. Schulz. "Comparing the Quality of Pro- and Anti-vaccination Online Information: A Content Analysis of Vaccination-related Webpages." *BMC Public Health* 16, no. 38 (2015): 1-12.

Salali, Gul Deniz, and Mete Sefa Uysal. "COVID-19 Vaccine Hesitancy is Associated with Beliefs on the Origin of the Novel Coronavirus in the UK and Turkey." *Psychological Medicine* 52, no. 15 (2020): 3750-3752.

Savulescu, Julian, and Evangelos D. Protopapadakis. "'Ethical Minefields' and the Voice of Common Sense: A Discussion with Julian Savulescu." *Conatus - Journal of Philosophy* 4, no. 1. (2019): 125-133.

Shuster, Evelyne. "The Nuremberg Code: Hippocratic Ethics and Human Rights." *The Lancet* 351, no. 9107 (1998): 974-977.

Stefanopoulos, Theodoros K., Stavros Tsitsiridis, Lena Antzouli, and Kritseli Giota. "Hippocratic Oath." *Anthology of Ancient Greek Literature*, https://www.greek-language.gr/digitalResources/ancient_greek/anthology/literature/browse.html?text_id=220 [in Greek].

Taylor, Steven, Caeleigh A. Landry, Michelle M. Paluszek, Rosalind Groenewoud, Geoffrey S. Rachor, and Gordon J. G. Asmundson. "A Proactive Approach for Managing COVID-19: The Importance of Understanding the Motivational Roots of Vaccination Hesitancy for SARS-CoV-2." *Frontiers in Psychology* 11 (2020): 57-59.

United Nations. "Universal Declaration of Human Rights." *UN General Assembly* 302, no. 2 (1948): 14-25.

Vance, Karl, William Howe, and Robert P. Dellavalle. "Social Internet Sites as a Source of Public Health Information." *Dermatologic Clinics* 27, no. 2 (2009): 133-136.

Viafora, Corrado. "Toward a Methodology for the Ethical Analysis of Clinical Practice." *Medicine, Health Care and Philosophy* 2, no. 3 (1999): 283-297.

Ward, Jeremy K., Caroline Alleaume, Patrick Peretti-Watel, Valérie Seror, Sébastien Cortaredona, Odile Launay, and Jocelyn Raude. "The French Public's Attitudes to a Future COVID-19 Vaccine: The Politicization of a Public Health Issue." *Social Science and Medicine* 265 (2020): 113-114.

World Health Organization. "Addressing Vaccine Hesitancy." <https://www.who.int/news/item/18-08-2015-vaccine-hesitancy-a-growing-challenge-for-immunization-programmes>.

Zhou, Yuetong. "Aristotle's Golden Mean: Vague and Inapplicable?" In *Proceedings of the 2nd International Conference on Language, Art and Cultural Exchange*, edited by H. Ma, N. W. Lam, M. Ganapathy, and K. Tarigan, 1-5. Amsterdam and Paris: Atlantis Press, 2021.

