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Abstract

The development of a safe and effective Coronavirus vaccine has dominated the concerns of the international community over the course of the last six months. While the global community agrees on the importance of its development, it is not entirely clear how a vaccine will be distributed globally. The implications of which entity, whether a state or private company, develops a trusted vaccine first and how efficiently and equitably that vaccine is distributed are yet to be seen. Using Classical Realism, Institutional Liberalism, and Normative Theory, this paper seeks to discuss and analyze how the development of a vaccine will affect the international community. Specifically, using Classical Realism, this paper will address the implications of a global power developing a vaccine and how nationalism will affect that development and subsequent distribution. Secondly, through Interdependence Liberalism, this paper will analyze the prospects of vaccine distribution among states, the role of non-governmental organizations (NGOs) and international organizations, as well as private industry, in vaccine development. Furthermore, through this lens this paper will analyze the interdependence of states regarding effective global containment of the coronavirus. Lastly, this paper will employ Normative Theory to analyze the obligation of major world powers, specifically the United States, to ensure a safe and effective vaccine is developed efficiently and distributed equitably. Evidently, containing and eliminating the coronavirus through a vaccine is both of paramount importance and laden with challenges. This paper aims to determine the most predictive theory relating to how the international system will react to the development of a coronavirus vaccine and what the implications and predicted outcomes are for the actors which comprise the global community.

Keywords

COVID-19, Vaccine Nationalism, Classical Realism, Institutional Liberalism, Normative Theory

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**Applying Classical Realism, Institutional Liberalism and Normative Theory to the
Development and Distribution of a COVID-19 Vaccine**

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Abstract: The development of a safe and effective Coronavirus vaccine has dominated the concerns of the international community over the course of the last six months. While the global community agrees on the importance of its development, it is not entirely clear how a vaccine will be distributed globally. The implications of which entity, whether a state or private company, develops a trusted vaccine first and how efficiently and equitably that vaccine is distributed are yet to be seen. Using Classical Realism, Institutional Liberalism, and Normative Theory, this paper seeks to discuss and analyze how the development of a vaccine will affect the international community. Specifically, using Classical Realism, this paper will address the implications of a global power developing a vaccine and how nationalism will affect that development and subsequent distribution. Secondly, through Interdependence Liberalism, this paper will analyze the prospects of vaccine distribution among states, the role of nongovernmental organizations (NGOs) and international organizations, as well as private industry, in vaccine development. Furthermore, through this lens this paper will analyze the interdependence of states regarding effective global containment of the coronavirus. Lastly, this paper will employ Normative Theory to analyze the obligation of major world powers, specifically the United States, to ensure a safe and effective vaccine is developed efficiently and distributed equitably. Evidently, containing and eliminating the coronavirus through a vaccine is both of paramount importance and laden with challenges. This paper aims to determine the most predictive theory relating to how the international system will react to the development of a coronavirus vaccine and what the implications and predicted outcomes are for the actors which comprise the global community.

Introduction

The COVID-19 pandemic has touched the lives of every citizen in every country around the world. The rapid spread of the virus caused sweeping economic shutdowns, among a wide range of other dramatic shifts in everyday life. Almost as soon as the pandemic hit, the global community began to focus its attention on the development of a safe and effective vaccine in addition to containing the spread. For billions of people, the development and distribution of a vaccine signifies hope for a return to normalcy. In many wealthy, western nations, the expectation of having access to an eventual vaccine seems to be a foregone conclusion. However, many countries and people around the globe are left wondering if, when and how they will receive vital access to this life saving vaccine. Ensuring the equitable and timely distribution of a vaccine to all corners of the globe is no small task. For that matter, neither is the development of a safe and effective vaccine in the first place. Vaccine development is an already complex and costly process which, in the context of COVID-19, is only compounded by an accelerated time frame due to the immediate and widespread need. In circumstances other than a pandemic, the development of an effective and trusted vaccine typically consists of three phases, antigen identification and production, nonclinical testing and clinical trials, and typically takes approximately 10-15 years (Han 2015). Now of course the global community is currently operating under extraordinary circumstances, but the challenge of developing a

universally trusted and effective vaccine in a year or less cannot be understated. With so many unknowns as to how exactly this production and distribution process will unfold, it is worth examining the critical dimensions of this issue as they relate to the international community. Furthermore, in utilizing three essential theories of international relations, classic realism, institutional liberalism and normative theory, it is possible to uncover looming issues and identify the most likely outcomes regarding the nature of the development and distribution of a COVID-19 vaccine.

Key Dimensions

A lot of questions currently surround the production and distribution of a COVID-19 vaccine, even as major corporations like Pfizer and Moderna release promising results from their clinical trials. One of the primary concerns for the international community is vaccine nationalism, which threatens to inhibit the equitable and timely distribution of a vaccine around the world. Vaccine nationalism implies a situation in which nations vie for first access to vaccines as they become available. Involved with this idea of vaccine nationalism are concerns that actions taken by specific nations will hurt the global community's ability to effectively combat and contain the pandemic (Hafner et al. 2020). A couple of these worrisome actions include the possibility that specific countries gain and maintain control over the means of production for a vaccine and that a few select countries buy up large shares of a vaccine's doses due to their relative wealth. By late August, the United States had already preordered approximately 800 million doses of the vaccine from 6 different producers currently engaged in trials (Callaway 2020). The relative wealth and spending capacity of many western nations, such as the United States and the UK certainly places them in a

more advantageous position than other, less economically well-off nations. One of the main reasons why vaccine nationalism is one of the primary concerns facing the global community is that widespread and equitable distribution is essential to effectively containing the pandemic. If a vaccine is only available to specific nations or regions, the possibility of the international community achieving herd immunity, which is essential to ending the pandemic, is severely threatened (Weintraub et al. 2020). Furthermore, while not only costly in terms of lives, vaccine nationalism also poses a significant economic threat. According to one study, should the vaccine not be distributed in a timely and widespread manner due to vaccine nationalism, the potential cost to the global economy is approximately \$1.2 trillion annually in terms of GDP (Hafner et al. 2020). The reason for this significant economic threat is that if the virus is still spreading at a rapid rate in certain regions of the world, it will still negatively impact the global economy even if certain countries or regions have the virus under control.

An extremely important dimension pertaining to the development and distribution of a vaccine is the essential role being played by private corporations and non-governmental organizations (NGOs). Two companies which have been making headlines recently, Pfizer and Moderna, are emblematic of the private sectors essential role in vaccine production. During the beginning stages of vaccine development in April, 56 of the 78 confirmed candidates (72%) were represented by the private sector compared to only 22 by the public sector (Le et al. 2020). Essentially, private sector corporations are leading the way in terms of production. Pfizer, the American pharmaceutical company, recently released the results of their latest phase of trials which reported that their vaccine candidate was 95% effective in preventing COVID-19 infection (Pfizer 2020). Moderna, a biotechnology company, also recently released the results of their latest trial

which showed similar efficacy rates to that of the Pfizer vaccine. With promising results coming from the private sector, countries around the world are working, as they have been for months, to secure the purchase of necessary doses. Although no vaccine is currently in distribution, as of late November approximately 6.4 billion doses of candidate vaccines have already been purchased, with the “vast majority” of pre orders coming from high-income countries (Cuddy 2020). Evidently, the sale of potential vaccine doses is where the effects of vaccine nationalism are felt the most as the wealthiest countries stand to have a significant advantage in procuring the maximum doses as soon as possible.

NGOs, such as the World Health Organization (WHO), among others, are working to ensure equitable distribution extends beyond high-income nations. Beginning in April, the World Health Organization, working in conjunction with Gavi, the Vaccine Alliance, established the “three pillars” which comprise the Access to COVID-19 Tools (ACT). One of these pillars is COVAX, which aims to provide equitable distribution and access to all the countries of the world, regardless of their relative income and wealth. Essentially, COVAX is a global access facility which aims to ensure that all countries who buy into the program receive access to a COVID-19 vaccine. Through Official Development Assistance (ODA), as well as private donations, COVAX aims to make it possible for the lower-income countries to receive the benefits of a vaccine. While the central focus of this initiative is on these less-wealthy countries, higher-income nations also are eligible to buy in as well (Berkley 2020). In fact, as of midOctober, 183 of the world’s countries had joined the program, with notable exceptions being Russia and the United States. Current member countries represent a diverse financial background comprising high and low-income

countries alike. These current high participation rates give hope that this global initiative will be able to effectively meet its goal of combining resources and ensuring the distribution of 2 billion doses of a vaccine within the coming year (Lawler 2020). Overall, the role of NGOs, primarily the WHO and their COVAX facility, serves as the primary example of a coordinated, international effort to ensure access to a vaccine is equitable.

Another intriguing dimension of the debate surrounding vaccine production and distribution are the moral considerations and obligations to ensure that all people, regardless of privilege or status, can obtain doses of an eventual vaccine. Essentially, this aspect of the global vaccine challenge poses the question of whether world powers and wealthy nations, like the United States, have a moral obligation to work towards equitable vaccine distribution around the world, not just within their own countries. As many of the international community's highest income nations are purchasing large shares of vaccine doses, numerous health groups and other organizations are calling for these same nations to dedicate a portion of their vaccine shares to a global humanitarian effort. This proposed "humanitarian buffer" plays upon an asserted moral obligation of the international community to ensure that vaccines will be available to all people, including those in disadvantaged or otherwise challenging situations such as refugees and those living in war-torn regions where effective distribution through one government or another is unlikely (Safi 2020). This call for the international community's support of humanitarian efforts to provide vaccinations for all people regardless of circumstance stands in stark contrast with the state of global health systems prior to the onset of the pandemic. Essentially, the global health system was, and some argue still is, "based on self-interests and national interests rather than on principles of justice" (Ruger 2020).

Many experts argue that this self-interest, which operated in place of a coordinated global effort, is to blame for the rapid spread and inequitable impact of COVID-19 around the world.

Classical Realism

Prior to discussing vaccine production and distribution through the lens of classical realism, it is worth identifying the key aspects of this theory of international relations. The central principles of classical realism are characterized by self-interest, significant importance placed on power and national security and the assumption of anarchy regarding the international system. Furthermore, another tenet of classical liberalism outlines the assertion that obligations to the international community are nonexistent (Eager 2020).

Through the lens of classical realism, the rise and continued prevalence of vaccine nationalism comes as no surprise. Operating under the assumption that national security and self-interest are paramount, the trend of countries vying to be first in line to receive vaccines, even at the cost of disadvantage in the global community, appears to occur in a manner predicted by classical realism.

Furthermore, under this theory, countries should do whatever possible to procure the maximum doses of a vaccine on the most accelerated timetable possible.

This predicted global competition for a vaccine is evidenced by the rise in cyber espionage as it relates to vaccine nationalism. In a report on the aspects of vaccine nationalism, it was stated that cyber espionage efforts have risen drastically, with efforts aimed at keeping tabs on other countries' progress on the development and research of a vaccine (Fidler 2020). This development is not shocking when examined through classical realism as one country staying informed on the progress of other nations certainly seems to help promote their

national security and power. One of the primary reasons why the race for a vaccine appears to be causing conflict and fostering self-interest is that a successful and rapidly produced and distributed vaccine represents a return to normalcy, which involves the reopening of economies. It is not outside the realm of possibility that countries believe that, should they have a vaccine before other nations, their relative power would increase due to their ability to reopen their economy before others. Another reason why countries want to be the first to develop a vaccine is demonstrated by Russia apparently “winning” the vaccine race. While there is currently no global consensus on the efficacy and safety of the Russian vaccine, John Moore, a vaccine researcher at Weill Cornell Medical College, stated of Russia that, “They want to be seen as keeping up with their competitors in other countries. It’s clearly a rushed announcement” (Cohen 2020). This assessment of Russia’s vaccine announcement clearly demonstrates a focus on national power, or an appearance of national power, in relation to the rest of the international system.

In terms of the tenet of classical realism that states that international obligations are essentially nonexistent, the expectation would be that countries do not contribute to global vaccine distribution efforts, such as COVAX, but rather focus entirely on procuring vaccines for their country alone. It appears, to this point, that a couple countries are acting in accordance with this key realist principle. Of the 183 countries that have currently committed to the COVAX initiative, the two notable absences are the United States and Russia (Lawler 2020). Perhaps the reason behind this reluctance to join the global effort is based on both countries' belief that they already have guaranteed sufficient doses of a vaccine. For example, as previously stated, the United States has already preordered millions of doses while Russia has reportedly developed a vaccine of

their own. Regardless of their status regarding access to a vaccine, choosing not to engage in the only real global effort to produce a vaccine that will be available worldwide demonstrates the belief that no meaningful obligation to the international community, at least in terms of public health, exists. While it is still possible for these two countries to contribute to the global vaccine effort, the reality of the situation seems to be best summed up by a quote from Peter Marks, an official with the U.S. Food and Drug Administration, which compared the race for a vaccine to oxygen masks in a plane by saying “You put on your own first, then we want to help others as quickly as possible” (Bollyky and Bown 2020). In general, classical realism predicts that vaccine nationalism will persist with individual countries placing importance on distributing vaccines to their citizens above all other concerns.

Institutional Liberalism

The theory of institutional liberalism focuses on the effects and benefits of international organizations and NGOs in promoting cooperation and mutual gains from membership and involvement. In the context of the COVID-19 pandemic and the race for a vaccine, the seemingly most important institution is the World Health Organization (WHO), specifically its combined efforts with Gavi, the Vaccine Alliance, in establishing the global access facility called COVAX. The primary goal of COVAX, as discussed above, is to promote equitable allocation of vaccines, especially for lower-income nations. In the context of institutional liberalism, this lens would predict that nations would choose to buy into the initiative in order to reap the benefits which their membership would provide. In the specific case of COVAX, benefits appear to exist for both low-income and high-income countries alike. For example, low-income countries, through

subsidized membership, would be able to gain access to sufficient vaccine doses that they may otherwise not be able to secure. As for high-income countries, the director of COVAX states that the advantage of joining the program is that the wide-ranging number of vaccine candidates essentially provides a safety net or backup plan should they need an additional supply of vaccine doses down the road (Berkley 2020). Under the lens of institutional liberalism, these expected benefits should help facilitate cooperation within the international system. Furthermore, the success of institutional initiatives like COVAX lies in the belief that the countries of the world have shared interests in effectively containing the virus around the globe. In general, the theory of liberalism places faith in human rationality and the ability of humans to cooperate when necessary in order to facilitate progress (Eager 2020). According to this tenet of liberalism, countries choosing to engage with NGOs to accelerate efforts to distribute a vaccine globally are placing rationality and cooperation at the forefront of their decision making. Essentially, joining these institutional efforts constitutes the belief of nations that the benefits of cooperation and a coordinated effort are worth the investment and membership.

Normative Theory

In general, normative theory is primarily focused on ethical and moral considerations concerning how countries and actors within the international system should theoretically act in accordance with moral principles. When considering the principles of normative theory in the context of the ongoing pandemic and race for a vaccine, the main assertion that seems to follow moral considerations is that the countries of the world, primarily those higher-income countries, should work to ensure that vaccine distribution is equitable and is

available to all persons regardless of circumstance. The reason this assertion appears to be a reasonable moral obligation is based on the belief that a COVID-19 vaccine is a global public good and should be treated as such, instead of as a consumer product which goes to whoever is willing to pay the most. As a public good, COVID-19 vaccines should be expected to reach every region of the globe with relative equity and nations should not monopolize production or access. Evidently, the concepts employed by normative theory conflict directly with the reality of vaccine nationalism currently facing the international community. A “three-way conflict” for access to vaccines appears to have arisen as private industry, national interests and international organizations represent distinct interests. For example, private industry is interested in creating a vaccine and securing patents that allow them to turn a profit while national interests drive countries to try to procure vaccines for themselves alone. It appears, as of now, that the only entity aiming to provide equitable distribution of the vaccine as a public good are international organizations (Hein and Paschke 2020).

Overall, under normative theory, certain actions would be deemed immoral while others would be described as following moral considerations. For example, wealthy nations who are buying extremely large portions of vaccine supplies may be purported to be acting immorally as they have the financial resources to both supply their own citizens with sufficient doses of a vaccine while also aiding international efforts aimed at ensuring the vaccine reaches every corner of the globe. While vaccine nationalism is undoubtedly present, examples of nations acting in accordance with moral obligations are also prevalent. For example, economically advantaged countries such as the United Kingdom, among other nations, have contributed significantly toward the COVAX initiative which, for the UK, constituted a \$727 million donation (Akhtar 2020).

Furthermore, other countries have engaged in acts of goodwill that seem to be rooted in moral obligations. One of those countries is Canada who currently has secured the most vaccine doses per capita. Since they are economically well off and have sufficient vaccination capabilities, Canada is currently engaged in discussions which should ultimately result in the donation of excess doses to lower-income countries (Ljunggren et al. 2020). The example set by Canada represents a stark contrast to the negative implications of vaccine nationalism and demonstrates what normative theory would presumably classify as acting according to moral principles. In conclusion, the role of moral considerations in international health concerns can be summed up by one quote from Jennifer Ruger which states, “Fundamentally, justice lies at the root of global health issues” (Ruger 2020). Essentially, should countries act in a manner incongruent with justice in terms of global health, then they are also acting in a way that does not align with moral considerations.

Predictive Analysis

After considering the range of literature presented and assessing the current landscape of vaccine production and projected distribution, it appears that the theory with the greatest potential for predictive analysis is classical realism. While all three theories hold some predictive potential, the capacity of the principles of classical realism to both predict and shape the nature of how vaccine production and distribution will unfold seems to outweigh that of the other two. While NGOs and other international organizations will certainly play a role in the eventual distribution of a vaccine to low-income countries and other economically disadvantaged regions and people, they remain at the mercy of high-income countries for their support and success. For example, the WHO

relies heavily on voluntary donations from its member countries as they make up approximately 80% of their funding. Furthermore, the United States represents the biggest contributor to the WHO and in May announced they would be leaving the organization (Marion 2020). Due to their reliance on voluntary donations and funding from member countries, it will be very challenging for international efforts to trump the effects of vaccine nationalism and self-interest. In terms of current supply, COVAX remains well behind those economically well-off countries who have engaged in the preordering of vaccine doses for months (Callaway 2020).

The significant influence and prevalence of vaccine nationalism signals that the key principles of classical realism, primarily self-interest, concerns for power and a lack of obligation to the international community, are winning out over the central aspects of institutional liberalism and normative theory. The current scenario facing the international community is best described by the quote, “the global COVID-19 vaccine landscape is a patchwork of narrow nationalist approaches and broader international initiatives” (Morrison et al. 2020). Although these international initiatives do exist, their scope and efficacy are still yet to be seen. Some doubt has already been cast over whether COVAX has the resources it requires to turn their goal of equitable access into reality (Morrison et al. 2020). Furthermore, the fact that two of the international community’s more powerful actors, the United States and Russia, have not contributed to the effort spells trouble for the ability of the program to achieve distribution within the same timeframe projected for those countries who have already entered into agreements with private corporations to secure a large supply of vaccines (Lawler 2020). Overall, classical realism outlines that countries will place their own citizens and interests above that of the global community and will be inclined to withhold resources in order to ensure their

individual country is able to adequately control the spread of the virus, even if that means allowing the pandemic to continue in other parts of the world. Furthermore, it appears entirely possible that vaccine nationalism and the principles of classical realism dominate until those high-income countries have secured and distributed a vaccine in their country. Perhaps once widespread distribution within economically advantaged countries occurs the international community will witness an influx of resources and assistance to ensure vaccines are eventually attainable for the entirety of the global population.

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