

Analyzing the Morality of Owning and Suspending Patent Rights for COVID-19 Vaccines in the Light of Catholic Social Teaching

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Abstract

Using the Roman Catholic Church's set of moral principles on social concerns called Catholic social teaching (CST) and utilizing some secondary data and scientific research literature, this article examines the morality of India and South Africa's request to the World Trade Organization (WTO) to temporarily suspend the property rights and patents of top pharmaceutical companies to their vaccines to allow low-income countries to locally manufacture them to save the lives of the poor during this COVID-19 pandemic. Applying the theological method of "See-Judge-and-Act," this article argues that the suspension of patents for COVID vaccines is morally justifiable in the light of CST's principles on the universal destination of earth's goods, the common good, and preferential option for the poor. The top pharmaceutical companies cannot claim absolute ownership to their vaccines as they do not totally own and fund the entire development and production process. Furthermore, the right to private ownership and patents has a social dimension and must serve the common good and welfare of the poor, especially in times of global emergency such as the COVID-19 pandemic. Patent holders have a moral obligation to promote the common good and save the lives of the poor which must prevail over their capitalist quest for profit. This article recommends that Catholics and Christians must join this crusade for the suspension of patents as part of their spirituality of social transformation.

Summary: Applying the Roman Catholic Church's set of moral principles on social concerns called CST and utilizing some secondary data and scientific research literature, this article examines the morality of India and South Africa's request to the World Trade Organization to temporarily suspend the property rights and patents of top pharmaceutical companies to their vaccines to allow low-income countries to locally manufacture them to save the lives of the poor during the current pandemic. Applying the theological method of "See-Judge-and-Act," this article argues that the suspension of patents for COVID vaccines is morally justifiable in the light of CST's

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principles on the universal destination of earth goods, the common good, and preferential option for the poor. It recommends that Catholics and Christians must join this crusade for the suspension of patents as part of their spirituality of social transformation.

Short Summary: This article argues that patents of the top pharmaceutical companies to their COVID-19 vaccines must be suspended as requested by India and South Africa in the WTO in the light of CST's moral principles on the universal destination of earth's goods, the common good, and preferential option for the poor.

Keywords

Catholic social teaching, Common good, COVID-19 pandemic, COVID-19 vaccines, Intellectual Property Rights, Patent waiver, Universal destination of earth's goods, Preferential option for the poor, World Trade Organization

Introduction

On early October 2020, India and South Africa requested the World Trade Organization (WTO) and Trade Related Aspects of Intellectual Property (TRIPS) Council to temporarily suspend among others the Intellectual Property (IP) or patents of vaccines of top vaccine manufacturers to control and contain the COVID-19 pandemic. They argued that this request is only temporary and does not affect other TRIPS rules: as soon as enough people are vaccinated to reach a global herd immunity, this request is deemed terminated (Labonte and Johri 2020). Under the 2001 WTO declaration, which has become an amendment of the intellectual property (IP) rules in 2017, "a waiver allows poorer countries that do not have the capacity to make pharmaceutical products-and thus cannot benefit from compulsory licensing—to import cheaper generic drugs from countries where those drugs are protected by patent" (Bacchus 2020, 1).

Despite this provisional nature of India and South Africa's request, the top vaccine manufacturers led by Big Pharma, the consortium of world's largest and most influential drug companies that constitutes Pharmaceutical Research and Manufacturers of America (PhRMA) immediately dismissed it and opposed any suspension of their ownership rights to the vaccines. In a press statement, the PhRMA called this request as an empty promise that "will sow confusion between

public and private partners, further weaken already strained supply chains and foster the proliferation of counterfeit vaccines" (PhRMA 2021, 1). In the same statement, it also warned the public that allowing patent waivers would lead to illegal copying of the COVID-19 vaccines without compulsory licensing and "would undermine innovation and raise the risk of unsafe viruses" (Bacchus 2020, 1). "At present, the proposal does not have the support of the pharmaceutical industry, nor that of most high-income nations. Instead, these countries are pledging to share more of their own vaccines with low-income nations and to provide more funding to charitable vaccine-provision schemes such as COVAX" (Nature 2021, 478).

"One of the biggest concerns about IP waivers is that they provide a short-cut to competitors looking to acquire expensive technology. Companies also say that IP relief will not accelerate vaccine manufacturing, because materials are in short supply, and it can take several years to build up capacity from scratch" (Nature 2021, 478). Some authors oppose it as they consider the waiver as unnecessary. Bacchus (2020) and Mercurio (2021), for example, contend that the suspension of patents would not improve access to effective and affordable vaccines and could negatively affect research and development (R&D) as well as innovation in the pharmaceutical sector. Santos Rutschman and Barnes-Weise (2021) further call patent waivers as the wrong tool for the right goal, doubting that

they can replicate and produce larger quantities of vaccines for COVID-19. Others are skeptical on the propriety of waivers and maintain that voluntary licenses should take care of most COVID-19 shortage issues (WHO 2021).

Lastly, some scholars such as Gonsalves and Yamey (2021) specifically claim that suspension of patents alone will not solve the shortage of COVID-19 vaccine, although they conceded that this is a crucial step toward people's vaccines. As Maxmen (2021) explains, suspending patents is only one of the three major obstacles to make vaccines available to developing countries, which also include the (1) transfer of knowledge and (2) massive investment in manufacturing capacity to empower poor countries to locally manufacture the COVID-19 vaccines. But patent waiving is the first and crucial step in increasing production and lowering the price of medicines and vaccines. For instance, the waiver given by the WTO-TRIPS agreement to drugs to treat HIV/AIDS in 2001 has resulted in the lowering the price and widening its usage. "According to an estimate by Médecins Sans Frontière, the prices of patented drugs dropped to less than a tenth of the previous level in one year, improving access to the drugs around the world" (Ito 2021, para. 7). A waiver can also facilitate creation of future manufacturing hubs, engaging a greater number of manufacturers, and ultimately yield more doses faster (Erfani et al. 2021). It can "prevent companies that hold the IP for COVID-19 vaccines from blocking vaccine production elsewhere on the grounds of IP and allow countries to produce COVID-19 medical goods locally and import or export them expeditiously" (Erfani et al. 2021, 2). Ultimately, it can "help drive down the cost of vaccines, therapeutics, and diagnostic tools, and result in increased access in the developing world" (Zarocostas 2021, 1871).

Although the strong concerns against patent suspension of vaccines and medicines for COVID-19 have some merits, they nevertheless overlooked the moral foundation behind the suspension of patent request as well as the promise of increasing production and lowering the price. The patent waiver basically aims to

save the lives of millions of poor people in low-income countries during the current pandemic. The current debate questioning the absolute ownership of patents by big pharmaceutical firms and the appropriateness of the suspension of these IP rights to their COVID-19 vaccines often center on its legal, logistical, and technical aspects but sideline its moral significance, confirming the WHO Director-General Dr. Tedros Adhanom Ghebreyesus's observation that the world in today's COVID-19 pandemic is indeed on the brink of a catastrophic moral failure that costs the lives of the poor (WHO 2021). Understanding the private ownership of COVID-19 vaccines by top drug companies from Catholic point of view, specifically from a set of moral principles of the Roman Catholic Church (RCC) called Catholic social teaching (CST) is apparently overlooked in this debate. There is an apparent dearth of Catholic theological literature that applies CST principles to examine the morality of the property rights claimed by big pharmaceutical companies over COVID-19 vaccines. Specifically, there is a paucity of Catholic scholarly articles that investigate the morality of India and South Africa's request to WTO to suspend Big Pharma's patents to their COVID-19 vaccines, which are said to cause artificial shortage (Navarro 2021) and discrimination in the global vaccine distribution or what Winnie Byanyima, the executive director of the Joint United Nations Programme on HIV/ Acquired Immune Deficiency Syndrome (UNAIDS), calls "vaccine apartheid" (Gonsalves and Yamey 2021). This article therefore intends to modestly contribute something to address this gap.

It primarily examines the morality of the property rights of top drug makers to their COVID-19 vaccines and India and South Africa's request to WTO to suspend these rights in the light of CST's moral principles on private property, the common good, and the preferential option for the poor as the primary theological framework. The WTO has acknowledged that an effective response to COVID-19 pandemic requires rapid access to affordable vaccines, aside from medicines and other medical technologies. However, it is

apparent that a strong patent protection enjoyed by pharmaceutical companies can weaken this response and lead to vaccine apartheid. Although there are other factors that can hinder developing countries to manufacture COVID-19 vaccines, the waiving of the patents by top pharmaceutical companies to allow compulsory licensing is the key to produce people's vaccines (Gonsalves and Yamey 2021) to address the current artificial global shortage of supply (Navarro 2021).

Using CST's popular methodology of "See-Judge-Act," this article first aims to "see" the concrete situation, evaluating relevant facts and research studies on the ownership of COVID-19 vaccines by big pharmaceutical companies to explore some moral justifications to support the request for patent suspension in WTO by India and South Africa. Then, it proceeds to "judge" and "act" on the moral issues to provide moral justifications to allow patent waivers using CST's moral principles on property rights, the common good, and the preferential option for the poor and to propose a plan of action on how the RCC and Catholic Christians must respond to the call of patent suspension for COVID-19 vaccines to protect the common good.

This article has been divided into two main parts. The first part briefly elaborates CST's doctrines on the right to private property, the common good, and preferential option for the poor as the main conceptual framework to understand the Catholic morality of patent ownership and suspension of patent rights. The second part analyzes the morality of the patent rights of the top pharmaceutical companies to their vaccines and the request for suspension of these rights by India and South Africa.

CST and the Right to Private Property

CST as a Moral Guide for Property Rights

The RCC and CST have always upheld the right to own private property as a God-given

right. Traditional Catholic arguments on the right of private ownership claim that individual effort gives the laborer a right to property created through labor and that the right to property is a useful foundation for human freedom (Andolsen 2008). The Compendium of the Social Doctrine of the Church (CSDC) views private property as one of the conditions of civil liberty and an essential element of an authentically social and democratic society (Pontifical Council for Justice and Peace 2005). The RCC supports the right to private property, such as the right to own patents in modern capitalist system, to support invention and innovation. Pope Leo XIII, in his social encyclical Rerum Novarum [Labor and Capital], for instance, argues, "When man thus spends the industry of his mind and the strength of his body in procuring the fruits of nature by that act he makes his own that portion of nature's field which he cultivates that portion on which he leaves, as it were, the impress of his own personality" (Rerum Novarum 1891, para. 7). Thus, for the RCC, "[p]rivate ownership must be held sacred and inviolable. The law, therefore, should favor ownership, and its policy should be to induce as many as possible of the people to become owners" (Pontifical Council for Justice and Peace 2005, para. 7).

The RCC supports the rights of individuals, groups, and business firms to own private property. In capitalist economic system, everything of value is owned by someone. These property rights give a person the exclusive power to use, consume or change the object owned. Property rights then express the exclusive claim of absolute disposal of a product or material by a person (Sun 2021). These rights include the individual's freedom to use the things he or she owns. "Patent law grants the right to make, use, sell, offer for sale, or import a patented invention for the term of the patent. These rights are protected as a bundle of strong exclusive rights according to the scope of patent claims. Patents... are private property rights entitling patentees to absolute enjoyment and possession" (Sun 2021, 151).

But the question arises as to whether private property is directed solely to the individual good or to the common good. This concern about private property has been debated by some economists and philosophers as an aspect of the issue of social justice and human flourishing. But for CST, the right to private property is not absolute and is subordinated to the moral principle called the universal destination of earth's goods. Private ownership has a social dimension. It is a social mortgage and subordinated to the principle of the common good. Pope Leo XIII reminded the wealthy property owners on their binding moral obligation to share their monetary surplus with those in need: "Man should not consider his material possessions as his own, but as common to all, so as to share them without hesitation when others are in need" (Rerum Novarum 1891, para. 2). Pope Pius XI (1931) also stressed to put a balance between the individual right to private property and the social dimension of property in the encyclical Quadragesimo Anno [In the Fortieth Year]. And Pope John Paul II's (1991) in his encyclical Centesimus Annus [One Hundred Years] further stressed the social dimension of private ownership under the moral principle on the universal destination of earth's goods. CST always emphasizes the moral obligations attached to the right to private property: The trend in Catholic social thought is recognizing the legitimacy of private ownership if utilized to promote human dignity, autonomy, and the common good (Andolsen 2008).

At the core of CST is the moral principle of the common good. According to its primary and broadly accepted sense, the common good indicates "the sum total of social conditions which allow people, either as groups or as individuals, to reach their fulfilment more fully and more easily" (Pontifical Council for Justice and Peace 2005, para. 164). It concerns with the life of all and "calls for prudence from each, and even more from those who exercise the office of authority. One of its essential elements requires that the social wellbeing and development of the public itself must be prioritized over personal well-being"

(Catechism of the Catholic Church 1993, para.1906). Catholic bishops often apply the principle of the common good to assess and judge social issues in their pastoral letters. In the US, for instance, Catholic bishops applied CST's doctrine on the common good to assess the moral dimension of the American economy in their pastoral letter entitled "Economic Justice for All: A Pastoral Letter on Catholic Social Teaching and the U.S. Economy" (United States Catholic Bishops 1986).

In realm of public health, the RCC continues to issue moral directives based on CST to protect the common good during the current pandemic. The Congregation for the Doctrine of the Faith (CDF), for instance, issued an official statement entitled "Note on the morality of using some anti-Covid-19 vaccines" to clarify the issue on vaccination. It states, for instance, that "from the ethical point of view, the morality of vaccination depends not only on the duty to protect one's own health, but also on the duty to pursue the common good. In the absence of other means to stop or even prevent the epidemic, the common good may recommend vaccination, especially to protect the weakest and most exposed" (Congregation for the Doctrine of the Faith 2020, para 5).

Although the RCC has issued some moral guidelines on COVID-19 pandemic, there is a lack of scholarly research evaluating the ethical dimension of the big pharmaceutical companies' current control and ownership of vaccines and medicines, goods which are crucial and essential to put an end to the current pandemic. Analyzing the absolute ownership of Big Pharma to medical products and technologies during the pandemic has not been scrutinized closely by Catholic moral theologians, although the RCC has supported the right to private property and developed a set of social doctrines called CST to guide Christians, pharmaceutical firms, and state authorities on how to form a society marked by peace, concord, and justice toward all (Dulles 2002). CST "embodies social principles and moral teaching that is articulated in the papal, conciliar, and other official documents issued since the late nineteenth century and dealing with the economic, political, and social order" (Kizito and Juma 2015, 1). It provides "a set of principles for reflection, criteria for judgment and directives for action" for all the members of the Church and society on social issues (Gaudium et Spes 1965, para.23). To direct state authorities, drug companies, and Christians who are struggling to control the current COVID-19 pandemic, CST has moral principles that can serve as a moral guide beyond the legal prescriptions and regulations to serve the common good and promote the welfare of the poor who cannot afford the high cost of medicines and vaccines for COVID-19.

Universal Destination of Earth's Goods, the Common Good, and Option for the Poor

The principle of the universal destination of earth's goods simply states that all material goods of this earth are created by God for everyone. This is the universal purpose of all created things as taught by the Book of Genesis when God created the world (Gen. 1). "God intended the earth and all that it contains for the use of every human being and people. Thus, as all men follow justice and unite in charity, created goods should abound for them on a reasonable basis" (Gaudium et Spes 1965, para. 69). The goods of this world are all meant by God for all—for their own personal and/or family sustenance—without favoring a particular person, group, or country. This principle recognizes the right of people to own private property, but also emphasizes its limitation by stressing the social and moral aspects of owning material things. In this regard, Pope John Paul II's social encyclical Sollitudo Rei Socialis [The Social Concern] is emphatic:

It is necessary to state once more the characteristic principle of Christian social doctrine; the goods of this world are originally meant for all. The right to private property is valid and necessary, but it does not modify the value of this principle. Private property, in fact, is under 'social mortgage,' which means that it has an

intrinsically social function, based upon and justified precisely by the principle of the universal destination of material goods. (*Sollicitudo Rei Socialis* 1987, para.42)

The sharing of private property is also supported by CST's social doctrines on the common good and preferential option for the poor. CST teaches that every "society that wishes and intends to remain at the service of the human being at every level is a society that has the common good – the good of all people and of the whole person – as its primary goal. The human person cannot find fulfilment in himself, that is, apart from the fact that he exists "with" others and "for" others" (Pontifical Council for Justice and Peace 2005, para. 165). Achieving the common good "involves all members of society, no one is exempt from cooperating, according to each one's possibilities, in attaining it and developing it (Pontifical Council for Justice and Peace 2005, para. 167).

Corollary to the teaching on the common good is the moral principle on the preferential option for the poor. The "Church provides special treatment for those who are poor and marginalized in society" (Acts and Decrees 1991, no. 312). Thus, to protect the common good also requires loving the needy who have less in life. A basic moral test for every society is to know how its most vulnerable members are faring. This test is not new to Christians. It is based on the parable of the Last Judgment. Giving preferential option for the poor implies thinking first of the needs of those who are most vulnerable in society, remembering Christ's words that for "Whatsoever you do to the least of your brothers and sisters, you do unto me" (Matthew 25:40).

The current global healthcare system under COVID-19 pandemic is controlled by a form of capitalism of Big Pharma that is maximizing profit and contrary to CST's teaching on the common good and social welfare of the poor. This quest for profit during pandemics is the darker dimensions of what Friedrichs and Vegh Weis (2021) calls "predatory capitalism" (i.e., an economic system where "the few" profit at

the expense of the many). To control the market to maximize profit at the expense of the common good and the welfare of poor is highly immoral for the RCC. CST endorses capitalism but with some reservations. In *Centesimus Annus* [One Hundred Years], for instance, Pope John Paul II warns of unbridled quest for profit:

The Church acknowledges the legitimate role of profit as an indication that a business is functioning well... But profitability is not the only indicator of a firm's condition... the purpose of a business firm is not simply to make a profit but is to be found in its very existence as a community of persons who in various ways are endeavoring to satisfy their basic needs. (*Centesimus Annus* 1991, para. 35)

To earn profit in business is morally acceptable for the RCC, but the welfare of the poor must be protected because the wealth of this earth is created by God for all. Top pharmaceutical companies received subsidies from governments and private foundations, yet the pricing of their medicines and vaccines are multiple times the production cost and thus denies the poor of their right to health. Binagwaho et al., (2021) argue that it is unethical for most pharmaceutical firms to receive more profits than most large companies in other industries, especially for an industry whose primarily mission is to save lives. It is also unethical for these firms to sell drugs at extremely high prices to poor countries because of patents as a large portion of their capital comes from public and private funding, where their only major role is commercializing research for medicines and vaccines.

See-Judge-and-Act in Patent Ownership and Waivers on COVID-19 Vaccines

The theological method of "See-Judge-Act" is rooted in the Catholic Worker Movement which had been promoted by Joseph Cardinal Cardijn in Belgium during the Mid-19th century (Alt 2019). This method is a movement from engagement and solidarity, then to reflection and understanding, and finally to

cooperative involvement and action (Sands 2018). The Catholic CST author Fr. Thomas Massaro, S.J. (2000, 103) views this method in a three-step process: "Take a careful look at the situation ... make an accurate judgement about what is going on ... act vigorously." The first step aims to know the facts of the case before one can make a moral judgment whether a particular action is morally correct or wrong.

See: The Facts Behind Patent Control of COVID-19 Vaccines by Big Pharmaceutical Companies

In analyzing the morality of patent rights and waivers, the first step in the "See-Judge-and-Act" method is to examine the facts whether the manufacturers have provided all the human and economic capital to manufacture their vaccines to claim total ownership. It needs an empirical assessment to know the components and stages of the vaccine development and the extent the big pharmaceutical firms spent and participated in the production process, research, and manufacturing to justify absolute ownership to their finished product. It also needs a critical assessment whether the patents of the vaccines can really lead to innovation as claimed by Big Pharma as the primary reason why suspension of IP rights must not be allowed. Finally, it necessitates an assessment on the effects of patents to the global common good and welfare of the poor. An empirical understanding of these three areas is necessary before moving to the next stage of judging the morality of the exclusive ownership of patents for vaccines by big drug makers and suspending them during the COVID-19 pandemic in the light of CST.

The RCC encourages innovation and private ownership but put some moral limits to protect the common good and social welfare of the poor. As mentioned, people are entitled to the fruits of their labor but the common good of all must prevail over excessive profits. The primary reason why pharmaceutical companies, specifically vaccine manufacturers, are against patent waivers is its alleged negative effect to innovation. For the US pharmaceutical industry,

patent waivers and price regulation can kill innovation. US drug companies claim that they need higher prices for extra profits which they can use for more drug innovations and increased spending for research and development (R&D) for the benefit of the whole world (Lazonick et al. 2017).

This is indeed a noble reason to deny suspension of patents. However, what these top pharmaceutical firms say in public is different from what they do in actual practice. Lazonick et al. (2017), for instance, argue that top drug companies, such as the major US pharmaceutical firms, largely use their profits to maximize shareholder value (MSV). They allocate profits generated by high drug prices to massive repurchases, or buybacks, of their own corporate stock for the sole purpose of giving manipulative boosts to their stock prices. Thus, one can suspect that behind Big Pharma's concern for innovation can be a disguised corporate greed for profit. Large US pharma companies, for instance, claim that high prices of their products fund investments in innovation. "Yet the 18 drug companies in the S&P 500 Index in January 2016 and publicly listed from 2006 through 2015 distributed 99 percent of their profits to shareholders over the decade, 50 percent as buybacks and 49 percent as dividends" (Lazonick et al. 2017, 3).

Moreover, top pharmaceutical companies file several patents for their drugs which does necessarily imply more inventions and innovations. As I-MAK (2020) claims, "patent filings represent nothing more than a person or entity's belief they have invented something new and that it deserves a patent. Merely filing a patent tells us nothing about whether the invention claimed is new over existing technology" (I-MAK 2020, 2). "Public accounts of patent law tend to convey the idea that one product or drug usually corresponds to one patent for a duration of 20 years. The reality is that over the last few decades the pharmaceutical industry has gradually pushed legal boundaries to allow for an intricate 'evergreening' of patent rights. What this means is that many drugs often have multiple patents on them" (Thambisetty 2021, 2).

Vaccines' Public Character

The first moral argument against absolute private ownership of top pharmaceutical companies over COVID-19 vaccines especially during this pandemic and in favor of suspension of patents for COVID-19 vaccines is the public character of the development and funding of these vaccines. The RCC and CST fully support individual and group's ownership of goods and services that they privately produced and funded and but not when phases of the production process are largely owned by other groups such as private organizations and public agencies that use public funds. In this case, the ownership assumes a communal dimension or public character. It is an undeniable fact that investing in vaccine development is a long and tedious process and that developing and manufacturing COVID-19 vaccines to address the urgent need of fighting the highly infectious COVID-19 can also be a long, complex, and highly expensive process. Without the assistance of scientists, research centers, government institutions, philanthropic organizations, and government funding and multilateral networks assisting vaccine manufacturers, producing vaccines in record time can be impossible.

Proponents of patent waivers cite public investment in vaccine research and development as a reason to waive patent protections. Contrary to popular belief, the manufacturers of COVID-19 vaccines do not completely own and fund all the components of their Covid-19 injections. Much of its components are done in government institutions with public funding. No less that the director-general of the International Federation of Pharmaceutical Manufacturers and Associations himself, Mr. Thomas Cueni, acknowledged that without public funds the global pharmaceutical companies would not have developed swiftly their COVID-19 vaccines (Cueni 2020). The popular COVID-19 injections such as AstraZeneca, for example, obtained

\$1.7 billion from the Coalition for Epidemic Preparedness Innovations (CEPI) and UK and US governments for their non-replicating viral-vector technology. BioNTech and Pfizer earned \$445 million dollars for their mRNA technology from the German government. And Johnson & Johnson received \$1.5 billion from the US government for their non-replicating viral vector (Wouters et al. 2021).

Thus, Navarro (2021) claims that the development of the most essential part in the production of the most successful vaccines (Pfizer and Moderna) has been done with public funds, in public institutions, in rich countries (especially in the US and Germany). Developing a vaccine is a complex and timeconsuming process. Unlike conventional drugs, vaccines are intended for use to persons who have no signs of sickness to prevent the occurrence of diseases (Calina et al. 2020). Despite the success of some vaccines in the past, developing immunization remains a difficult task. As late as 2013, evidence showed that the failure rate for vaccines entering development was as high as 94%, and that the average time from preclinical studies to approval was 10.7 years (Kiszewski et al. 2021). Vaccines usually encounter underinvestment and would take 17 years to develop from medical research to hospital use which is not appropriate for today's pandemic that has already killed millions of people (Hanney et al. 2020).

But the development of the current COVID-19 vaccines presents a different case. Manufacturers have successfully produced 19 vaccines in less than a year. A great feat indeed since vaccines usually take more than a decade to develop (Hanney et al. 2020). The unusual speed of the current vaccines is primarily attributed to the funding and support from governments and various private and public institutions from developed countries that assist vaccine manufacturers in producing their Covid-19 injections. The production of the current COVID-19 vaccines therefore involves various actors, agencies, both private and public, and complex processes which are not entirely participated and financed by drug makers before they are rolled out to the market. Thus, the manufacturers' primarily role in the entire vaccine development and production process is only in the commercialization of these vaccine, the rest is done by the public that primarily use taxpayers' money. Thus, one may ask: Is the claim of absolute ownership by big pharmaceutical companies to their COVID-19 vaccines morally justifiable, given the significant public participation and huge funding which are involved in developing them?

The CEPI estimated that it usually needs \$2 billion to accelerate the development of vaccines against COVID-19 virus (CEPI 2020). This amount only includes expenses for phase 1 clinical trials of eight vaccine candidates, progression of up to six candidates through phase 2 and 3 trials, completion of regulatory and quality requirements for at least three vaccines and enhancing global manufacturing capacity for three vaccines. It excludes the costs of manufacture or delivery of the vaccines (Yamey et al. 2020, 1505). "As of Feb 3, 2021, there were 289 experimental COVID-19 vaccines in development, 66 of which were in different phases of clinical testing, including 20 in phase 3. Only five of these 66 vaccines those developed by AstraZeneca in partnership with Oxford University, BioNTech in partnership with Pfizer, Gamaleya, Moderna, and Sinopharm in partnership with the Beijing Institute—have been authorized by stringent regulatory authorities" after being initially funded by governments and private organizations (Wouters et al. 2021).

Aside from utilizing private and public funding for vaccine research and development, manufacturers also utilize the powerful network support from multilateral institutions such as the World Bank to expedite financial transactions for their vaccines. The CEPI, for instance, which aids vaccine development, is supported by a World Bank financial intermediary fund to enable it to bring together public, philanthropic, and private funding to respond to global priorities. Through this fund, CEPI can act as a global mechanism for funding vaccine development until doses can

be licensed or used under emergency use provisions (Yamey et al. 2020, 1405). Clearly, the manufacturers benefit from the global network support of public multilateral institutions to produce their COVID-19 vaccines quickly.

Public partnership of public agencies also aided manufacturers to expedite their vaccine development and production. In the US, for instance, the primary role of vaccine manufacturers is just to execute the clinical or process development and manufacturing plans, while the US government through its Operation Warp Speed (OWS) takes care of the technical, logistic, or financial hurdles. OWS is a partnership of the US Department of Health and Human Services (HHS), the Department of Defense (DOD), and the private sector to advance the development, manufacturing, and distribution of vaccines by providing "support to promising candidates and enabling the expeditious, parallel execution of the necessary steps toward approval or authorization of safe products by the Food and Drug Administration (FDA)" (Slaoui and Hepburn 2020, 1701).

Public agencies also assisted manufacturers for their clinical trials. Moderna, Pfizer and BioNTech, for instance, developed its mRNA vaccine in collaboration with the NIAID [National Institute of Allergy and Infectious Diseases], resulting in encouraging results and data. Several of the new pharmaceutical products which are currently available on the market received public funding, economic, and social support from private, philanthropic, and public institutions. This reflects the pattern of the drug manufacturing processes of big pharmaceutical companies. All 210 drugs approved in the US between 2010 and 2016, for example, are said to have obtained public grants for their research. Thus, "in the light of the billions in taxpayer dollars given to drug makers each year, the claim that the private sector is solely responsible for new, patentable drugs and vaccines does not hold up." With the current vaccine development for the current pandemic, no less that the European Union (EU) itself has acceded that Europe invested billions to help develop the world's first COVID-19 vaccines (I-MAK 2020, 6).

The Universal Destination of Earth's Goods: The Moral Limitations of Patents

Another moral argument that justifies the suspension of patent rights of big pharmaceutical companies over their COVID-19 vaccines is the moral limit set by CST on private ownership under the principles of the universal destination of earth's goods, the common good, and option for the poor. More than a third of the world's population has no access to essential drugs especially in the poorest regions of Africa and Asia and this is basically caused by the working of the patent system (Sterckx 2004). The swift development and approval of several safe and effective vaccines is a phenomenal scientific feat indeed. But data show that it is only the people in world's rich countries who are benefiting from this achievement rather than the world's poor. Thus far, "more than 1.1 billion doses of vaccine have been administered globally, but more than 80% of those have been administered in high- and upper middle-income countries, while just 0.3% have been administered in low-income countries" (WTO 2021a, 2021b).

Pope Francis and the Holy See support patent waivers and the easing of restrictions imposed by the WHO and TRIPS to allow a speedy and maximum access of people to COVID-19 vaccines (Zengarini 2021). Proponents argue that with suspension of patents countries can manufacture more COVID-19 vaccines and narrow the vaccination gap between rich and developing nations (Del Castillo 2021). Although a waiver is "not a silver bullet," it can nevertheless lead to legal certainty in the current multilateral trading system, resulting in an "increase public and private investment in low- and middle-income countries and therefore manufacturing capacity with absence of the legal threat of being sued or prosecuted for violating IP" (Iacobucci 2021). Erfani et al. (2021) argue that a waiver is vital to increase supply, achieve global herd

immunity, and advance global health equity. It can facilitate vaccine production, as well as demand for raw materials and active ingredients of the vaccines. It can also offer a path to overcome bottlenecks and expand production of necessary vaccine materials resulting in wider use to overcome backlog and inequality in vaccination.

Patent abuse by drug makers is one of the most influential drivers of pricing problem, restricting access of people, especially the poor to cheaper medicines. Allowing generics on the market has been shown to drastically reduce drug prices. Lantus, made by Sanofi, for instance, is the leading drug for people with type 1 diabetes. In the US, it filed a total of 74 patent applications to prevent competition for a total of 37 years. Because of this, Sanofi earned a total of \$5.7 billion in sales in 2017, increasing the burden of diabetes for patients by overpatenting and overpricing of Lantus (I-MAK Lantus Patent Report 2018). It makes \$15 million daily for selling this type of insulin in the US. But in Europe and Japan with fewer patent applications and multiple biosimilar competitors, the price of Lantus is much lower; thus, easily available for people with diabetes (Amin 2018). Prices of medicines to fight HIV in Brazil and sub-Saharan Africa also decline because of generics and liberalization of patent control. Generic and brand companies have played distinct roles in increasing their availability at prices below those charged by brand companies (Chien 2007).

Patent waiver can indeed lower the price of vaccines and medicines and widen their usage in the community. It can address the present artificial scarcity of COVID-19 vaccines in the global community and lack of access of poor nations to vaccine doses (Navarro 2021). Data on COVID-19 vaccination as of June 2021 revealed that 46% of people in high-income countries had received at least one dose of the vaccines compared to only 20% in middle-income countries. However, only 0.9% are vaccinated in low-income countries (Erfani et al. 2021).

This discrepancy and inequality in the global distribution of COVID-19 vaccines are largely attributed by poor countries to patents which give manufacturers complete control of their medical products and processes which are supported by WTO's TRIPS provisions which discourage compulsory licensing:

Pursuant to Article 31(f) of TRIPS, compulsory licenses must be used predominantly for the supply of the domestic market of the member state that issued the compulsory license and can, therefore, only be used to a limited extent for export. However, it would seem to be necessary that, if a country has insufficient or no manufacturing capacities and the drugs offered by foreign manufacturers are too expensive, the country should be allowed to look elsewhere for a suitable supplier. (Sterckx 2004, 52)

Under the WTO rules, patent holders can take their invention to market and maximize their returns on the rights held. A patent is a property right, to be used mostly as the property holder wishes to. But Sun argues that the U.S. patent law encourages the irresponsible exercise of patent rights through its asymmetric allocation of rights and responsibilities that embolden patent holders to abuse their rights and legitimized governmental condoning of exploitation (Sun 2021). "Patent law protects a bundle of strong exclusive rights that entitle patent holders to set product prices as high as they choose. Yet, it imposes very weak responsibilities upon patent holders in return, setting a low patent information threshold and enfeebling the experimental use exception and compulsory licensing as limitations on patent rights" (Sun 2021, 144).

Pharmaceutical companies regularly seek dozens or even hundreds of patents on a single drug, making it difficult for others such the local pharmaceutical firms of developing countries to imitate or participate in the manufacturing process. The bestselling drugs in US, for instance, have an average of 131 patent applications, staggered in their life cycles to maximize the exclusivity period. Thus, the average time of patent protection for

bestselling drugs can reach 38 years for just one invention (I-MAK 2020). Because of exclusive IP ownership, patents can create artificial scarcity such in the case of COVID-19 vaccines since poor and developing countries cannot reproduce them without authorization such as compulsory licensing by the patent holders. As Thambisetty (2021) explains: "Once the invention is created, the patent in effect generates an artificial scarcity allowing the value of the vaccine to be maintained, managed, and even increased. The scarcity feeds on underinvestment in capacitybuilding and reluctance to transfer technology and manufacturing know-how...It allows the patent holder to orchestrate the manufacture of the product through restrictive licensing" (Thambisetty 2021, 1).

Thus, one of the most severe moral failures in the implementation of measures to control the current pandemic has been the lack of equity in the distribution of the COVID-19 vaccines. The vaccine roll-out favored only the rich and industrialized nations, which pre-ordered the doses for 2021 to the detriment of millions of poor people inhabiting the developing world (Salamanca-Buentello and Daar 2021). Among the 29 poorest countries in the world, only Guinea in West Africa was able to vaccinate with only 55 persons as of this writing. But a small group of rich nations that includes Australia, Canada, Japan, the United Kingdom, the United States, and the European Union, which constitutes only 14% of the global population, has already purchased half of the planned 2021 supplies for top vaccines. Because of this discrepancy, it is projected that "at least a fifth of the world's people will not get access to COVID-19 vaccines until 2022, and [that] many low-income countries will have to wait until 2023 or 2024 for full immunization" (Amin 2021, 1). As of May 5, 2021, WHO also estimated that 80% of the more than 1.1 billion doses of vaccine will be purchased by high- and upper middleincome countries, with just less than one percent by low-income countries (WHO 2021).

Judge and Act: Analyzing Patent Right and Patent Waivers and Christian Response

The last two stages in the See-Judge-and-Act method are applying moral judgment whether the moral situation and factual assessment is moral or immoral based on CST's moral principles. As shown in the foregoing factual evaluation, India and South Africa's request for temporary suspension of patent right of big vaccine manufacturers over their vaccines is morally justifiable: Every country should have the right to make its own vaccines during a pandemic. This is the principle underpinning the campaign to temporarily waive intellectual property (IP) protection on coronavirus vaccines. This campaign is being backed by more than 100 countries, along with international organizations including the WHO and UN-AIDS. "The goal is to reduce the barriers to countries producing their own vaccines particularly for the lowest-income nations" (Nature 2021, 478). The current vaccines possess some public character as manufacturers largely depend on the various research organizations, public institutions, and public funding. Besides, private ownership has moral limits under CST principles on the universal destination of earth's goods, the common good, and welfare of the poor.

Advocates for strong international protection for the intellectual property of multinational corporations focus their arguments on private ownership of intellectual property rights but forgot the social dimension of ownership. "The drug companies' exclusive control over their drug formulas and processes are a social grant, not an innate right. The TRIPS Agreement is a social policy that may legitimately be subject to social scrutiny and social ethical limits, not an expression of the drug companies' unquestionable, primordial moral rights" (Andolsen 2008, 83). "The scientists who developed the drugs, the researchers and clinicians who tested them, and the workers who manufactured and distributed them all owe a portion of their skills to myriad forms of social capital" (Andolsen 2008, 82).

Thus, there is no solid moral basis for the top pharmaceutical companies' absolute ownership of their COVID-19 vaccines. manufacturing, marketing, and distribution efforts done by these firms are only part of the entire development and production process of the vaccines which are largely participated by people outside the company. Thus, it is a myth to claim that the source of all pharmaceutical innovation and vaccine development come from the private sector. As already mentioned, public and private funds and taxpayers' money largely contributed to the creation of the COVID-19 vaccines of big pharmaceutical companies. In this case, patent waiving or suspension of the IP rights of these companies is morally justifiable under CST principles.

The request by India and South Africa for the temporary suspension of IP rights can even be extended indefinitely when the common good and welfare of the poor in low-income countries are already affected citing CST's principle on the universal destination of earth's goods, especially in the case of medicines and vaccines for today's pandemic which are urgent and vital means to save lives of the poor in today's pandemic. In the light of these CST's moral principles, the multinational pharmaceutical companies cannot morally claim absolute ownership to the much-needed vaccines for humanity to fight COVID-19 and promote the global common good. All Christians and Catholics must support India and South Africa's request for suspension of patents for COVID-19 vaccines as well as other medicines and medical technologies, which are crucial to end the pandemic. The current vaccine apartheid caused by the total control of manufacturers over their vaccines through strong patent protection is a structural sin that the RCC and Christian believers must change as part of their spirituality of social transformation-by joining social movements and civil societies that aim to transform the current COVID-19 vaccines into people's vaccines which are accessible to all, especially to the poor and the oppressed in low-income countries.

Conclusion

This article has analyzed the morality of the ownership rights of top pharmaceutical companies over their COVID-19 vaccines through patents and suspending these rights as requested by India and South Africa in the WTO, applying CST's moral principles on the right of private property, the universal destination of earth's goods, and the option for the poor. Using the "See-Judge-and Act" theological method, it primarily provided two major moral arguments why suspending of patent rights of Big Pharma to their vaccines are morally justifiable in the light of CST moral teachings, namely, that the ownership of COVID-19 vaccines takes a communal character as various private and public organizations take part in the research and development of these vaccines and funded largely by governments and public institutions, and that private ownership has moral limits under the principles of the universal destination of earth's goods, the common good, and option for the poor. Patent waivers can bring down the prices of the COVID-19 vaccines as developing countries can now manufacture these popular vaccines with legal certainty with the assistance of the WTO and wealthy countries which regulate Big Pharma in the name of the global common good. Poor countries, which lack infrastructure to manufacture these vaccines and medicines for the pandemic, can then import cheaper generic versions because of patent suspension. Doling out of COVID-19 vaccines by rich countries through the COVAX facility would then be unnecessary. Ultimately, the current popular vaccines can eventually become people's vaccines with the greater production and supply of generic drugs and vaccines for COVID-19 around the world as a result of patent waiver. The WTO and rich countries must support India and South Africa's request for temporary patent suspension—if not indefinite suspension following CST's principle on the social dimension of private property—to contain the current COVID-19 pandemic for the sake of humanity's common good.

Christians and Catholics must then join this crusade for patent waivers of COVID-19 vaccines and medicines as part of their spirituality of social transformation.

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Note

- 1. Proponents of patents waivers claim that voluntary licensing is extremely complex and expensive to apply for compared to compulsory licensing (WHO 2021). A voluntary licensing is "where a pharmaceutical company that holds patents on a product (patentee) offers on his own accord a license to a third party (usually a generic producer) to produce, market and distribute the patented product. In exchange, the patentee will usually request a royalty on the net sales made by the licensee as well as impose other restrictions." See Tahir Amin, Voluntary licensing practices in the pharmaceutical sector: An acceptable solution to improving access to affordable medicines? I-MAK Website (8 February 2007): 3. https://www.phrma.org/ en//www.i-mak.org/wp- content/uploads/2017/10/ Oxfam-voluntaryLicensingResearchIMAKWebsite.
- 2. Compulsory licensing refers to the "practice of authorizing a third party to make, use, or sell a patented invention without the patentee's consent, has long provided an antidote to the perceived ills of the patent system. Under the Agreement on Trade Related Aspects of Intellectual Property Rights ('TRIPS'), compulsory licensing is authorized under certain circumstances, such as

public health emergencies. However, until recently, few compulsory licenses had been actually issued under TRIPS." See Colleen V. Chien, "Cheap Drugs at What Price to Innovation: Does the Compulsory Licensing of Pharmaceuticals Hurt Innovation?" 18 Berkeley Tech. Law Journal 18, no. 853 (2003): 856, https://digitalcommons.law.scu.edu/facpubs/25.

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