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### Pandemics

**Global health inequality threatens progress in fight vs COVID-19 encouraging vaccine resistant mutations**

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(Jenni, <https://www.newsweek.com/who-warns-world-blind-understanding-covid-spread-hurting-ability-end-pandemic-1614722>)

A lack of testing for COVID-19 in parts of the world is preventing countries from having a clear picture of how the virus is spreading and therefore hurting the world's chances at **fighting the virus and ending the pandemic**, according to the World Health Organization. **Health inequities** throughout the world have plagued the global response to COVID-19 from the outset and WHO has pushed higher income countries to help lower income countries in the interest of ending the pandemic. Along with restricted access to vaccines, lower income countries have struggled to have sufficient testing, meaning the virus is likely going undetected in certain areas, further enabling its ability to spread. Low testing rates is "leaving the world blind to understanding where the disease is and how it's changing," Dr. Tedros Adhanom Ghebreyesus, director general of the WHO said on Friday during a press briefing. Without improving global testing rates, Ghebreyesus said the world can't "fight the disease" or mitigate the risk it poses to people around the globe. who blind covid spread cases On Friday, the World Health Organization warned the world is "blind" to how COVID-19 is spreading because of a lack of testing in certain places. WHO Director-General Tedros Adhanom Ghebreyesus attends a daily press briefing on the new coronavirus dubbed COVID-19, at the WHO headquaters on March 2, 2020, in Geneva. FABRICE COFFRINI//AFP/GETTY IMAGES NEWSWEEK NEWSLETTER SIGN-UP > One of Ghebreyesus' biggest frustrations with the pandemic response is the failure to **evenly distribute the vaccine** around the world. In some countries, like the United States and other higher-income nations, significant portions of the population have been vaccinated. While those large vaccinated populations help reduce the spread of the virus in some areas, other countries, especially those in Africa, haven't been able to vaccinate even 10 percent of their population. This puts the entire world at risk because when the virus is able to spread throughout communities it **has the ability to mutate**, thereby increasing the possibility that a mutation could **evade the vaccines**. It's a scenario public health officials have been warning about for months and Ghebreyesus said on Friday that "hard won **gains are in jeopardy**" or have already been lost because the virus has been able to spread. Nearly 30 countries have high or rising oxygen needs and the shortage of life-saving oxygen could lead to increased deaths. More than 196 million cases of COVID-19 have been reported around the world, according to a Johns Hopkins University tracker, and more than 4.2 million people have died. Ghebreyesus suspected the number of cases would top 200 million within the next two weeks and warned that health systems in many countries **are being overwhelmed.** Preventing hospitals from exceeding capacity was a massive concern when the pandemic first broke out and a year later, parts of the U.S. are having their health systems strained as the more transmissible Delta variant spreads. On Thursday, Arkansas Governor Asa Hutchinson declared a public health emergency that allows the state to bring in health care workers from outside Arkansas and makes it easier for retired health care workers and medical students to become licensed. The goal is to help alleviate stress on health care systems and Hutchinson said they've had people waiting in ambulances because there wasn't an open spot in a hospital. That strain will only become more exacerbated if a mutation occurs that evades the vaccine, as inoculations have proven effective at helping to keep people out of the hospital. Ghebreyesus warned that more variants will emerge if global access to vaccines and testing doesn't improve. "The pandemic will end when the world chooses to end it. It is in our hands. We have all the tools we need. We can prevent this disease. We can test for it and we can treat it," Ghebreyesus said.

**IP protections are the vital internal link to reduce vaccine inequality. Empirics disprove all pro patent arguments**

**Kumar, PhD, 7-12**-21

(Rajeesh, Associate Fellow Manohar Parrikar Institute for Defence Studies and Analysis, https://www.idsa.in/issuebrief/wto-trips-waiver-covid-vaccine-rkumar-120721)

In October 2020, India and South Africa had submitted a proposal to the World Trade Organization (WTO), suggesting a waiver of certain provisions of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement for the “prevention, containment and treatment of COVID-19”. The proposal seeks the waiver of “the implementation, application, and enforcement of sections 1, 4, 5 and 7 of part II of the TRIPS agreement”, which are stipulations referring to copyright, industrial design, patents, and undisclosed information (trade secrets).1 The proponents of the proposal argue that a waiver will **enable timely and equitable access** to affordable health products and technologies, including vaccines. Though many member countries had supported and co-sponsored the proposal, a small but influential group of countries, mainly Australia, Canada, the European Union (EU), Japan, the United Kingdom (UK) and the United States (US), opposed it. They argued that existing exceptions under the TRIPS Agreement are sufficient to address the concerns mentioned in the proposal. This resulted in sidelining of the waiver proposal for months. However, on 5 May 2021, the Joseph Biden administration announced its support for waiving intellectual property protections for COVID-19 vaccines.2 It was a significant step towards breaking the seven-month gridlock, and led to many more countries modifying their position on the waiver proposal. On 25 May 2021, the co-sponsors of the waiver proposal submitted a revised proposal that specified the scope of the waiver as applying to “health products and technologies” and also added a section on the proposed duration of the waiver, i.e., three years.3 At present, more than 100 countries, including the US and China support this proposal. The principal opponent of the waiver is the EU and in June 2021, it submitted an alternative proposal to the TRIPS Council, which requested to keep TRIPS’ provisions intact and focused on compulsory licensing and removing vaccine export restrictions to address the concerns raised by India and South Africa.4 The EU proposal also stated that the TRIPS Agreement does not prevent countries from taking measures to protect public health.5 At the meeting of the TRIPS Council on 8–9 June 2021, the member states agreed to text-based negotiations focusing on two proposals tabled by members. The members also decided to hold a series of meetings till the end of July 2021 to take stock of the text-based negotiations. However, the latest developments show that the waiver discussions hit a hurdle due to a split between the developed and developing countries over the negotiation text. This brief discusses how TRIPS becomes a barrier to the equitable access of COVID-19 vaccines. It also examines how a waiver will help India in its fight against COVID-19 at home and abroad. TRIPS and its Exceptions TRIPS, a comprehensive multilateral agreement on Intellectual Property (IP), was an outcome of the Uruguay Round (1986–94) of negotiations of the General Agreement on Tariffs and Trade (GATT). The Agreement came into force on 1 January 1995 and offers a minimum standard of protection for Intellectual Property Rights (IPR).6 In WTO, IPR are divided into two main categories. First, copyright and related rights (Articles 9 to 14, Part II of the TRIPS Agreement). Second, industrial property that includes trademarks, geographical indications, industrial designs, patents, integrated circuit layout designs, and undisclosed information (Articles 15 to 38, Part II of the TRIPS Agreement).7 Article IX.3 and IX.4 of the Marrakesh Agreement Establishing the WTO deals with TRIPS waivers. Article IX.3 says that in “exceptional circumstances” the Ministerial Conference may waive off an obligation imposed on WTO member countries.8 Such a decision requires the support of three-fourths of the WTO membership. According to Article IX.4, any waiver granted for more than one year will be reviewed by the Ministerial Conference. Based on the annual review, the Conference may extend, modify, or terminate the waiver. The TRIPS Agreement provides some flexibility primarily in the form of compulsory licensing and research exceptions through Articles 30 and 31. While Article 30 permits WTO members to make limited exceptions to patent rights, Article 31 provides a detailed exception, provided certain conditions are met. Compulsory licensing is the process of granting a license by a government to use a patent without the patent holder's consent. Article 31 permits granting compulsory license under circumstances such as “national emergencies”, “other circumstances of extreme urgency”, “public noncommercial use”, or against “anti-competitive” practices.9 In addition to these original waivers, the Declaration on the TRIPS Agreement and Public Health, adopted at the 2001 Doha Ministerial Meeting, also recognises some exceptions, for instance, in situations of a public health emergency, member countries have the freedom to determine the grounds upon which compulsory licenses are granted. Similarly, under Article 66.1, the least developed countries (LDCs) are given waivers for implementing TRIPS on pharmaceuticals till 1 January 2033. COVID-19 and TRIPS Waiver Two significant factors rekindled the debate on TRIPS waiver for essential medical products—first, vaccine inequity, and second, the insufficiency of existing waiver provisions in fighting the COVID-19 pandemic. COVID-19 is an **exceptional circumstance**, and **equitable global access** to the vaccine is necessary to **bring the pandemic under control**. However, the world is witnessing quite the reverse, i.e., **vaccine nationalism**. Vaccine nationalism is “my nation first” approach to securing and stockpiling vaccines before making them available in other countries. A TRIPS waiver would be instrumental in addressing the **growing inequality in the production**, distribution, and pricing of the COVID-19 vaccines. Vaccine Inequity According to Duke Global Health Innovation Center, which monitors COVID-19 vaccine purchases, rich nations representing just 14 per cent of the world population have bought up to 53 per cent of the most promising vaccines so far. As of 4 July 2021, the high-income countries (HICs) purchased more than half (6.16 billion) vaccine doses sold globally. At the same time, the low-income countries (LICs) received only 0.3 per cent of the vaccines produced. The low and middle-income countries (LMICs), which account for 81 per cent of the global adult population, purchased 33 per cent, and COVAX (COVID-19 Vaccines Global Access) has received 13 per cent.10 Many HICs bought enough doses to vaccinate their populations several times over. For instance, Canada procured 10.45 doses per person, while the UK, EU and the US procured 8.18, 6.89, and 4.60 doses per inhabitant, respectively.11 Source:“Tracking COVID-19 Vaccine Purchases Across the Globe”, Duke Global Health Innovation Center, Updated 9 July 2021. Consequently, there is a significant disparity between HICs and LICs in vaccine administration as well. As of 8 July 2021, 3.32 billion vaccine doses had been administered globally.12 Nonetheless, **only one per cent** of people in LICs have been given at least one dose. While in HICs almost one in four people have received the vaccine, in LICs, it is one in more than 500. The World Health Organization (WHO) notes that about 90 per cent of African countries will miss the September target to vaccinate at least 10 per cent of their populations as a third wave looms on the continent.13 South Africa, the most affected African country, for instance, has vaccinated less than two per cent of its population of about 59 million. This is in contrast with the US where almost 47.5 per cent of the population of more than 330 million has been fully vaccinated. In Sub-Saharan Africa, vaccine rollout remains the slowest in the world. According to the International Monetary Fund (IMF), at current rates, by the end of 2021, a massive global inequity will continue to exist, with Africa still experiencing meagre vaccination rates while other parts of the world move much closer to complete vaccination.14 This vaccine inequity is not only morally indefensible but also **clinically counter-productive**. If this situation prevails, LICs could be waiting until 2025 for vaccinating half of their people. Allowing most of the world’s population to go unvaccinated will also **spawn new virus mutations, more contagious viruses** leading to a steep rise in COVID-19 cases. Such a scenario could cause **twice as many deaths** as against distributing them globally, on a priority basis. Preventing this humanitarian catastrophe requires **removing all barriers** to the production and distribution of vaccines. TRIPS is one such barrier that prevents vaccine production in LMICs and hence its equitable distribution. TRIPS: Barrier to Equitable Health Care Access The opponents of the waiver proposal argue that IPR are not a significant barrier to equitable access to health care, and existing TRIPS flexibilities are sufficient to address the COVID-19 pandemic. **However, history suggests the contrary.** For instance, when South Africa passed the Medicines and Related Substances Act of 1997 to address the HIV/AIDS public health crisis, nearly 40 of world’s largest and influential pharma companies took the South African government to court over the violation of TRIPS. The Act, which invoked the compulsory licensing provision, allowed South Africa to produce affordable generic drugs.15 The Big Pharma also lobbied developed countries, particularly the US, to put bilateral trade sanctions against South Africa.16 Similarly, when Indian company Cipla decided to provide generic antiretrovirals (ARVs) to the African market at a lower cost, Big Pharma retaliated through patent litigations in Indian and international trade courts and branded Indian drug companies as thieves.17 Another instance was when Swiss company Roche initiated patent infringement proceedings against Cipla’s decision to launch a generic version of cancer drug, “erlotinib”. Though the Delhi High Court initially dismissed Roche's appeal by citing “public interest” and “affordability of medicines,” the continued to pressure the generic pharma companies over IPR. 18 Likewise, Pfizer’s aggressive patenting strategy prevented South Korea in developing pneumonia vaccines for children.19 A recent document by Médecins Sans Frontières (MSF), or Doctors Without Borders, highlights various instances of how **IP hinders manufacturing and supply of diagnostics,** medical equipment, treatments and vaccines during the COVID-19 pandemic. For instance, during the peak of the COVID-19 first wave in Europe, Roche rejected a request from the Netherlands to release the recipe of key chemical reagents needed to increase the production of diagnostic kits. Another example was patent holders threatening producers of 3D printing ventilators with patent infringement lawsuits in Italy.20 The MSF also found that patents pose a severe threat to access to affordable versions of newer vaccines.21 Source:“COVID-19 Vaccine R&D Investments”, Global Health Centre, Graduate Institute, Geneva, Updated 9 July 2021. The opponents of the TRIPS waiver also argue that **IP is the incentive for innovation** and if it is undermined, future innovation will suffer. However, most of the COVID-19 medical innovations, particularly vaccines, are developed with **public financing assistance**. Governments spent billions of dollars for COVID-19 vaccine research. Notably, out of $6.1 billion in investment tracked up to July 2021**, 98.12** per cent was public funding.22 The US and Germany are the largest investors in vaccine R&D with $2.2 billion and $1.5 billion funding. Source:“COVID-19 Vaccine R&D Investments”, Global Health Centre, Graduate Institute, Geneva, Updated 9 July 2021. Private companies received 94.6 per cent of this funding; Moderna received the highest $956.3 million and Janssen $910.6 million. Moreover, governments also invested $50.9 billion for advance purchase agreements (APAs) as an incentive for vaccine development. A recent IMF working paper also notes that **public research institutions** were a key driver of the COVID-19 R&D effort—accounting for 70 per cent of all COVID-19 clinical trials globally.23 The argument is that vaccines are developed with the support of substantial public financing, hence there is a public right to the scientific achievements. Moreover, private companies reaped billions in profits from COVID-19 vaccines. Source: Katharina Buchholz, “COVID-19 Vaccines Lift Pharma Company Profits”, Statista, 17 May 2021. One could argue that since the US, Germany and other HICs are spending money, their citizens are entitled to get vaccines first, hence vaccine nationalism is morally defensible. Nonetheless**, it is not the case**. The TRIPS Agreement includes several provisions which mandates promotion of technology transfer from developed countries to LDCs. For instance, Article 7 states that "the protection and enforcement of IP rights should contribute to the promotion of technological innovation and the transfer and dissemination of technology, to the mutual advantage of producers and users of technical knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations."24 Similarly, Article 66.2 also mandates the developed countries to transfer technologies to LDCs to enable them to create a sound and viable technological base. The LMICs opened their markets and amended domestic patent laws favouring developing countries’ products against this promise of technology transfer. Another argument against the proposed TRIPS waiver is that a waiver would not increase the manufacturing of COVID-19 vaccines. Indeed, one of the significant factors contributing to vaccine inequity is the lack of manufacturing capacity in the global south. Further, a TRIPS waiver will not automatically translate into improved manufacturing capacity. **However, a waiver would be the first but essential step to increase manufacturing capacity worldwid**e. For instance, to export COVID-19 vaccine-related products, countries need to ensure that there are no IP restrictions at both ends – exporting and importing. The market for vaccine materials includes consumables, single-use reactors bags, filters, culture media, and vaccine ingredients. Export blockages on raw materials, equipment and finished products harm the overall output of the vaccine supply chain. If there is no TRIPS restriction, more governments and companies will invest in repurposing their facilities. Similarly, the arguments such as that no other manufacturers can carry out the complex manufacturing process of COVID-19 vaccines and generic manufacturing as that **would jeopardise quality**, have also been **proven wrong in the past**. For instance, in the early 1990s, when Indian company Shantha Biotechnics approached a Western firm for a technology transfer of Hepatitis B vaccine, the firm responded that “India cannot afford such high technology vaccines… And even if you can afford to buy the technology, your scientists cannot understand recombinant technology in the least.”25 Later, Shantha Biotechnics developed its own vaccine at $1 per dose, and the UNICEF (United Nations Children’s Emergency Fund) mass inoculation programme uses this vaccine against Hepatitis B. In 2009, Shantha sold over 120 million doses of vaccines globally. India also produces high-quality generic drugs for HIV/AIDS and cancer treatment and markets them across the globe. Now, a couple of Indian companies are in the last stage of producing mRNA (Messenger RNA) vaccines.26 Similarly, Bangladesh and Indonesia claimed that they could manufacture millions of COVID-19 vaccine doses a year if pharmaceutical companies share the know-how.27 Recently, Vietnam also said that the country could satisfy COVID-19 vaccine production requirements once it obtains vaccine patents.28 Countries like the United Arab Emirates (UAE), Turkey, Cuba, Brazil, Argentina and South Korea have the capacity to produce high-quality vaccines but lack technologies and know-how. However, Africa, Egypt, Morocco, Senegal, South Africa and Tunisia have limited manufacturing capacities, which could also produce COVID-19 vaccines after repurposing. Moreover, COVID-19 vaccine IPR runs across the entire value chain – vaccine development, production, use, etc. A mere patent waiver may not be enough to address the issues related to its production and distribution. What is more important here is to share the technical know-how and information such as trade secrets. Therefore, the existing TRIPS flexibilities, such as compulsory and voluntary licensing, are insufficient to address this crisis. Further, compulsory licensing and the domestic legal procedures it requires is cumbersome and not expedient in a public health crisis like the COVID-19 pandemic.

#### We’re facing an imminent vaccine shortage now – only by establishing strong infrastructure can we prevent the next pandemic

Nancy Jecker and Caesar Atuire, 2021 – [*Department of Bioethics & Humanities, University of Washington School of Medicine, Seattle, Washington, USA,* [What’s yours is ours: waiving intellectual property protections for COVID-19 vaccines | Journal of Medical Ethics (bmj.com)](https://jme.bmj.com/content/47/9/595)]//recut

In reply, even if the final translation of science into marketable products would not occur absent financial incentives, how much money does it take? As noted, in 2021, Pfizer/BioNTech will make 15–30 billion US dollars from COVID-19 vaccine sales, Moderna 18–20 billion US dollars, and Johnson & Johnson 10 billion US dollars. Could these companies earn less and the incentive to innovate remain intact? To determine this, we make an evidence-based distinction between profits necessary to drive innovation and profits exceeding this. To gauge that, consider a study comparing the profits of 35 large pharmaceutical companies with 357 companies in the S&P 500 index between 2000 to 2018.[14](https://jme.bmj.com/content/47/9/595#ref-14) It found large pharmaceutical companies had significantly higher profits than other large companies. This suggests curbing pharmaceutical company profits would not necessarily cause innovation to grind to a halt. If profit aligned with comparable large S&P 500 companies, it seems reasonable to think it would sustain innovation.

Since consequentialist justifications treat the value of IP as purely instrumental, they are also vulnerable to counterarguments showing that a sought-after goal is not the sole or most important end. During the COVID-19 pandemic, we submit that the vaccinating the world is an overriding goal. With existing IP protections intact, the world has fallen well short of this goal. Current forecasts show that at the current pace, there will not be enough vaccines to cover the world’s population until 2023 or 2024.[15](https://jme.bmj.com/content/47/9/595#ref-15) IP protections further frustrate the goal of universal access to vaccines by limiting who can manufacturer them. The WHO reports that 80% of global sales for COVID-19 vaccines come from five large multinational corporations.[16](https://jme.bmj.com/content/47/9/595#ref-16) Increasing the number of manufacturers globally would not only increase supply, but reduce prices, making vaccines more affordable to LMICs. It would stabilise supply, minimising disruptions of the kind that occurred when India halted vaccine exports amidst a surge of COVID-19 cases.

It might be objected that waiving IP protections will not increase supply, because it takes years to establish manufacturing capacity. However, since the pandemic began, we have learnt it takes less time. Repurposing facilities and vetting them for safety and quality can often happen in 6 or 7 months, about half the time previously thought.[17](https://jme.bmj.com/content/47/9/595#ref-17) Since COVID-19 will not be the last pandemic humanity faces, expanding manufacturing capacity is also necessary preparation for future pandemics. Nkengasong, Director of the African Centres for Disease Control and Prevention, put the point bluntly, ‘Can a continent of 1.2 billion people—projected to be 2.4 billion in 30 years, where one in four people in the world will be African—continue to import 99% of its vaccine?’[18](https://jme.bmj.com/content/47/9/595#ref-18)

#### COVID and future pandemics create massive instability – this escalates and risks nuclear war – multitude of warrants.

**RECNA et al 21** - Research Center for Nuclear Weapons Abolition, Nagasaki University (RECNA), Asia Pacific Leadership Network (APLN) & Nautilus Institute

RECNA, APLN, and the Nautilus Institute, “Pandemic Futures and Nuclear Weapon Risks: The Nagasaki 75th Anniversary pandemic-nuclear nexus scenarios final report, Journal for Peace and Nuclear Disarmament, May 28th, 2021, <https://www.tandfonline.com/doi/pdf/10.1080/25751654.2021.1890867?needAccess=true> // sam :)

The relationship between pandemics and war is as long as human history. Past pandemics have set the scene for wars by weakening societies, undermining resilience, and exacerbating civil and inter-state conflict. Other disease outbreaks have erupted during wars, in part due to the appalling public health and battlefield conditions resulting from war, in turn sowing the seeds for new conflicts. In the post-Cold War era, pandemics have spread with unprecedented speed due to increased mobility created by globalization, especially between urbanized areas. Although there are positive signs that scientific advances and rapid innovation can help us manage pandemics, it is likely that deadly infectious viruses will be a challenge for years to come. The COVID-19 is the most demonic pandemic threat in modern history. It has erupted at a juncture of other existential global threats, most importantly, accelerating climate change and resurgent nuclear threat-making. The most important issue, therefore, is how the coronavirus (and future pandemics) will increase or decrease the risks associated with these twin threats, climate change effects, and the next use of nuclear weapons in war.5 Today, the nine nuclear weapons arsenals not only can annihilate hundreds of cities, but also cause nuclear winter and mass starvation of a billion or more people, if not the entire human species. Concurrently, climate change is enveloping the planet with more frequent and intense storms, accelerating sea level rise, and advancing rapid ecological change, expressed in unprecedented forest fires across the world. Already stretched to a breaking point in many countries, the current pandemic may overcome resilience to the point of near or actual collapse of social, economic, and political order. In this extraordinary moment, it is timely to reflect on the existence and possible uses of weapons of mass destruction under pandemic conditions – most importantly, nuclear weapons, but also chemical and biological weapons. Moments of extreme crisis and vulnerability can prompt aggressive and counterintuitive actions that in turn may destabilize already precariously balanced threat systems, underpinned by conventional and nuclear weapons, as well as the threat of weaponized chemical and biological technologies. Consequently, the risk of the use of weapons of mass destruction (WMD), especially nuclear weapons, increases at such times, possibly sharply. The COVID-19 pandemic is clearly driving massive, rapid, and unpredictable changes that will redefine every aspect of the human condition, including WMD – just as the world wars of the first half of the 20th century led to a revolution in international affairs and entirely new ways of organizing societies, economies, and international relations, in part based on nuclear weapons and their threatened use. In a world reshaped by pandemics, nuclear weapons – as well as correlated non-nuclear WMD, nuclear alliances, “deterrence” doctrines, operational and declaratory policies, nuclear extended deterrence, organizational practices, and the existential risks posed by retaining these capabilities – are all up for redefinition. A pandemic has potential to destabilize a nuclear-prone conflict by incapacitating the supreme nuclear commander or commanders who have to issue nuclear strike orders, creating uncertainty as to who is in charge, how to handle nuclear mistakes (such as errors, accidents, technological failures, and entanglement with conventional operations gone awry), and opening a brief opportunity for a first strike at a time when the COVID infected state may not be able to retaliate efficiently – or at all – due to leadership confusion. In some nuclear-laden conflicts, a state might use a pandemic as a cover for political or military provocations in the belief that the adversary is distracted and partly disabled by the pandemic, increasing the risk of war in a nuclear-prone conflict. At the same time, a pandemic may lead nuclear armed states to increase the isolation and sanctions against a nuclear adversary, making it even harder to stop the spread of the disease, in turn creating a pandemic reservoir and transmission risk back to the nuclear armed state or its allies. In principle, the common threat of the pandemic might induce nuclear-armed states to reduce the tension in a nuclear-prone conflict and thereby the risk of nuclear war. It may cause nuclear adversaries or their umbrella states to seek to resolve conflicts in a cooperative and collaborative manner by creating habits of communication, engagement, and mutual learning that come into play in the nuclear-military sphere. For example, militaries may cooperate to control pandemic transmission, including by working together against criminal-terrorist non-state actors that are trafficking people or by joining forces to ensure that a new pathogen is not developed as a bioweapon. To date, however, the COVID-19 pandemic has increased the isolation of some nuclear-armed states and provided a textbook case of the failure of states to cooperate to overcome the pandemic. Borders have slammed shut, trade shut down, and budgets blown out, creating enormous pressure to focus on immediate domestic priorities. Foreign policies have become markedly more nationalistic. Dependence on nuclear weapons may increase as states seek to buttress a global re-spatialization6 of all dimensions of human interaction at all levels to manage pandemics. The effect of nuclear threats on leaders may make it less likely – or even impossible – to achieve the kind of concert at a global level needed to respond to and administer an effective vaccine, making it harder and even impossible to revert to pre-pandemic international relations. The result is that some states may proliferate their own nuclear weapons, further reinforcing the spiral of conflicts contained by nuclear threat, with cascading effects on the risk of nuclear war.

#### **If COVID doesn’t kill us all, numerous factors guarantee the next pandemic will – preparing now is key to prevent extinction.**

Ord 20 – Philosopher and research fellow at the Future of Humanity Institute

Toby Ord, “Why we need worst-case thinking to prevent pandemics,” The Guardian, March 2020, https://www.theguardian.com/science/2020/mar/06/worst-case-thinking-prevent-pandemics-coronavirus-existential-risk

The world is in the early stages of what may be the most deadly pandemic of the past 100 years. In China, thousands of people have already died; large outbreaks have begun in South Korea, Iran and Italy; and the rest of the world is bracing for impact. We do not yet know whether the final toll will be measured in thousands or hundreds of thousands. For all our advances in medicine, humanity remains much more vulnerable to pandemics than we would like to believe. To understand our vulnerability, and to determine what steps must be taken to end it, it is useful to ask about the very worst-case scenarios. Just how bad could a pandemic be? In science fiction, we sometimes encounter the idea of a pandemic so severe that it could cause the end of civilisation, or even of humanity itself. Such a risk to humanity’s entire future is known as an existential risk. We can say with certainty that the novel coronavirus, named Covid-19, does not pose such a risk. But could the next pandemic? To find out, and to put the current outbreak into greater context, let us turn to the past. In 1347, death came to Europe. It entered through the Crimean town of Caffa, brought by the besieging Mongol army. Fleeing merchants unwittingly carried it back to Italy. From there, it spread to France, Spain and England. Then up as far as Norway and across the rest of Europe – all the way to Moscow. Within six years, the Black Death had taken the continent. Tens of millions fell gravely ill, their bodies succumbing to the disease in different ways. Some bore swollen buboes on their necks, armpits and thighs; some had their flesh turn black from haemorrhaging beneath the skin; some coughed blood from the necrotic inflammation of their throats and lungs. All forms involved fever, exhaustion and an intolerable stench from the material that exuded from the body. There were so many dead that mass graves needed to be dug and, even then, cemeteries ran out of room for the bodies. The Black Death devastated Europe. In those six years, between a quarter and half of all Europeans were killed. The Middle East was ravaged, too, with the plague killing about one in three Egyptians and Syrians. And it may have also laid waste to parts of central Asia, India and China. Due to the scant records of the 14th century, we will never know the true toll, but our best estimates are that somewhere between 5% and 14% of all the world’s people were killed, in what may have been the greatest catastrophe humanity has seen. The Black Death was not the only biological disaster to scar human history. It was not even the only great bubonic plague. In AD541 the plague of Justinian struck the Byzantine empire. Over three years, it took the lives of roughly 3% of the world’s people. When Europeans reached the Americas in 1492, the two populations exposed each other to completely novel diseases. Over thousands of years, each population had built up resistance to their own set of diseases, but were extremely susceptible to the others. The American peoples got by far the worse end of the exchange, through diseases such as measles, influenza and, especially, smallpox. During the next 100 years, a combination of invasion and disease took an immense toll – one whose scale may never be known, due to great uncertainty about the size of the pre-existing population. We can’t rule out the loss of more than 90% of the population of the Americas during that century, though the number could also be much lower. And it is very difficult to tease out how much of this should be attributed to war and occupation, rather than disease. At a rough estimate, as many as 10% of the world’s people may have been killed. Centuries later, the world had become so interconnected that a truly global pandemic was possible. Towards the end of the first world war, a devastating strain of influenza, known as the 1918 flu or Spanish flu, spread to six continents, and even remote Pacific islands. About a third of the world’s population were infected and between 3% and 6% were killed. This death toll outstripped that of the first world war. Yet even events like these fall short of being a threat to humanity’s long-term potential. In the great bubonic plagues we saw civilisation in the affected areas falter, but recover. The regional 25%-50% death rate was not enough to precipitate a continent-wide collapse. It changed the relative fortunes of empires, and may have substantially altered the course of history, but if anything, it gives us reason to believe that human civilisation is likely to make it through future events with similar death rates, even if they were global in scale. The Spanish flu pandemic was remarkable in having very little apparent effect on the world’s development, despite its global reach. It looks as if it was lost in the wake of the first world war, which, despite a smaller death toll, seems to have had a much larger effect on the course of history. The full history of humanity covers at least 200,000 years. While we have scarce records for most of these 2,000 centuries, there is a key lesson we can draw from the sheer length of our past. The chance of human extinction from natural catastrophes of any kind must have been very low for most of this time – or we would not have made it so far. But could these risks have changed? Might the past provide false comfort? Our population now is a thousand times greater than it was for most of human history, so there are vastly more opportunities for new human diseases to originate. And our farming practices have created vast numbers of animals living in unhealthy conditions within close proximity to humans. This increases the risk, as many major diseases originate in animals before crossing over to humans. Examples include HIV (chimpanzees), Ebola (bats), Sars (probably civets or bats) and influenza (usually pigs or birds). We do not yet know where Covid-19 came from, though it is very similar to coronaviruses found in bats and pangolins. Evidence suggests that diseases are crossing over into human populations from animals at an increasing rate. Modern civilisation may also make it much easier for a pandemic to spread. The higher density of people living together in cities increases the number of people each of us may infect. Rapid long-distance transport greatly increases the distance pathogens can spread, reducing the degrees of separation between any two people. Moreover, we are no longer divided into isolated populations as we were for most of the past 10,000 years. Together these effects suggest that we might expect more new pandemics, for them to spread more quickly, and to reach a higher percentage of the world’s people. But we have also changed the world in ways that offer protection. We have a healthier population; improved sanitation and hygiene; preventative and curative medicine; and a scientific understanding of disease. Perhaps most importantly, we have public health bodies to facilitate global communication and coordination in the face of new outbreaks. We have seen the benefits of this protection through the dramatic decline of endemic infectious disease over the past century (though we can’t be sure pandemics will obey the same trend). Finally, we have spread to a range of locations and environments unprecedented for any mammalian species. This offers special protection from extinction events, because it requires the pathogen to be able to flourish in a vast range of environments and to reach exceptionally isolated populations such as uncontacted tribes, Antarctic researchers and nuclear submarine crews. It is hard to know whether these combined effects have increased or decreased the existential risk from pandemics. This uncertainty is ultimately bad news: we were previously sitting on a powerful argument that the risk was tiny; now we are not. We have seen the indirect ways that our actions aid and abet the origination and spread of pandemics. But what about cases where we have a much more direct hand in the process – where we deliberately use, improve or create the pathogens? Our understanding and control of pathogens is very recent. Just 200 years ago, we didn’t even understand the basic cause of pandemics – a leading theory in the west claimed that disease was produced by a kind of gas. In just two centuries, we discovered it was caused by a diverse variety of microscopic agents and we worked out how to grow them in the lab, to breed them for different traits, to sequence their genomes, to implant new genes and to create entire functional viruses from their written code. This progress is continuing at a rapid pace. The past 10 years have seen major qualitative breakthroughs, such as the use of the gene editing tool Crispr to efficiently insert new genetic sequences into a genome, and the use of gene drives to efficiently replace populations of natural organisms in the wild with genetically modified versions. This progress in biotechnology seems unlikely to fizzle out anytime soon: there are no insurmountable challenges looming; no fundamental laws blocking further developments. But it would be optimistic to assume that this uncharted new terrain holds only familiar dangers. To start with, let’s set aside the risks from malicious intent, and consider only the risks that can arise from well-intentioned research. Most scientific and medical research poses a negligible risk of harms at the scale we are considering. But there is a small fraction that uses live pathogens of kinds that are known to threaten global harm. These include the agents that cause the Spanish flu, smallpox, Sars and H5N1 or avian flu. And a small part of this research involves making strains of these pathogens that pose even more danger than the natural types, increasing their transmissibility, lethality or resistance to vaccination or treatment. In 2012, a Dutch virologist, Ron Fouchier, published details of an experiment on the recent H5N1 strain of bird flu. This strain was extremely deadly, killing an estimated 60% of humans it infected – far beyond even the Spanish flu. Yet its inability to pass from human to human had so far prevented a pandemic. Fouchier wanted to find out whether (and how) H5N1 could naturally develop this ability. He passed the disease through a series of 10 ferrets, which are commonly used as a model for how influenza affects humans. By the time it passed to the final ferret, his strain of H5N1 had become directly transmissible between mammals. The work caused fierce controversy. Much of this was focused on the information contained in his work. The US National Science Advisory Board for Biosecurity ruled that his paper had to be stripped of some of its technical details before publication, to limit the ability of bad actors to cause a pandemic. And the Dutch government claimed that the research broke EU law on exporting information useful for bioweapons. But it is not the possibility of misuse that concerns me here. Fouchier’s research provides a clear example of well-intentioned scientists enhancing the destructive capabilities of pathogens known to threaten global catastrophe. Of course, such experiments are done in secure labs, with stringent safety standards. It is highly unlikely that in any particular case the enhanced pathogens would escape into the wild. But just how unlikely? Unfortunately, we don’t have good data, due to a lack of transparency about incident and escape rates. This prevents society from making well-informed decisions balancing the risks and benefits of this research, and it limits the ability of labs to learn from each other’s incidents. Security for highly dangerous pathogens has been deeply flawed, and remains insufficient. In 2001, Britain was struck by a devastating outbreak of foot-and-mouth disease in livestock. Six million animals were killed in an attempt to halt its spread, and the economic damages totalled £8bn. Then, in 2007, there was another outbreak, which was traced to a lab working on the disease. Foot-and-mouth was considered a highest-category pathogen, and required the highest level of biosecurity. Yet the virus escaped from a badly maintained pipe, leaking into the groundwater at the facility. After an investigation, the lab’s licence was renewed – only for another leak to occur two weeks later. In my view, this track record of escapes shows that even the highest biosafety level (BSL-4) is insufficient for working on pathogens that pose a risk of global pandemics on the scale of the Spanish flu or worse. Thirteen years since the last publicly acknowledged outbreak from a BSL-4 facility is not good enough. It doesn’t matter whether this is from insufficient standards, inspections, operations or penalties. What matters is the poor track record in the field, made worse by a lack of transparency and accountability. With current BSL-4 labs, an escape of a pandemic pathogen is only a matter of time. One of the most exciting trends in biotechnology is its rapid democratisation – the speed at which cutting-edge techniques can be adopted by students and amateurs. When a new breakthrough is achieved, the pool of people with the talent, training, resources and patience to reproduce it rapidly expands: from a handful of the world’s top biologists, to people with PhDs in the field, to millions of people with undergraduate-level biology. The Human Genome Project was the largest ever scientific collaboration in biology. It took 13 years and $500m to produce the full DNA sequence of the human genome. Just 15 years later, a genome can be sequenced for under $1,000, and within a single hour. The reverse process has become much easier, too: online DNA synthesis services allow anyone to upload a DNA sequence of their choice then have it constructed and shipped to their address. While still expensive, the price of synthesis has fallen by a factor of 1,000 in the past two decades, and continues to drop. The first ever uses of Crispr and gene drives were the biotechnology achievements of the decade. But within just two years, each of these technologies were used successfully by bright students participating in science competitions. Such democratisation promises to fuel a boom of entrepreneurial biotechnology. But since biotechnology can be misused to lethal effect, democratisation also means proliferation. As the pool of people with access to a technique grows, so does the chance it contains someone with malign intent. People with the motivation to wreak global destruction are mercifully rare. But they exist. Perhaps the best example is the Aum Shinrikyo cult in Japan, active between 1984 and 1995, which sought to bring about the destruction of humanity. It attracted several thousand members, including people with advanced skills in chemistry and biology. And it demonstrated that it was not mere misanthropic ideation. It launched multiple lethal attacks using VX gas and sarin gas, killing more than 20 people and injuring thousands. It attempted to weaponise anthrax, but did not succeed. What happens when the circle of people able to create a global pandemic becomes wide enough to include members of such a group? Or members of a terrorist organisation or rogue state that could try to build an omnicidal weapon for the purposes of extortion or deterrence? The main candidate for biological existential risk in the coming decades thus stems from technology – particularly the risk of misuse by states or small groups. But this is not a case in which the world is blissfully unaware of the risks. Bertrand Russell wrote of the danger of extinction from biowarfare to Einstein in 1955. And, in 1969, the possibility was raised by the American Nobel laureate for medicine, Joshua Lederberg: “As a scientist I am profoundly concerned about the continued involvement of the United States and other nations in the development of biological warfare. This process puts the very future of human life on earth in serious peril.” In response to such warnings, we have already begun national and international efforts to protect humanity. There is action through public health and international conventions, and self-regulation by biotechnology companies and the scientific community. Are they adequate? National and international work in public health offers some protection from engineered pandemics, and its existing infrastructure could be adapted to better address them. Yet even for existing dangers this protection is uneven and under-provided. Despite its importance, public health is underfunded worldwide, and poorer countries remain vulnerable to being overwhelmed by outbreaks. Biotechnology companies are working to limit the dark side of the democratisation of their field. For example, unrestricted DNA synthesis would help bad actors overcome a major hurdle in creating extremely deadly pathogens. It would allow them to get access to the DNA of controlled pathogens such as smallpox (whose genome is readily available online) and to create DNA with modifications to make the pathogen more dangerous. Therefore, many synthesis companies make voluntary efforts to manage this risk, screening their orders for dangerous sequences. But the screening methods are imperfect, and they only cover about 80% of orders. There is significant room for improving this process, and a strong case for making screening mandatory. We might also look to the scientific community for careful management of biological risks. Many of the dangerous advances usable by states and small groups have come from open science. And we’ve seen that science produces substantial accident risk. The scientific community has tried to regulate its dangerous research, but with limited success. There are a variety of reasons why this is extremely hard, including difficulty in knowing where to draw the line, lack of central authorities to unify practice, a culture of openness and freedom to pursue whatever is of interest, and the rapid pace of science outpacing that of governance. It may be possible for the scientific community to overcome these challenges and provide strong management of global risks, but it would require a willingness to accept serious changes to its culture and governance – such as treating the security around biotechnology more like that around nuclear power. And the scientific community would need to find this willingness before catastrophe strikes. Threats to humanity, and how we address them, define our time. The advent of nuclear weapons posed a real risk of human extinction in the 20th century. There is strong reason to believe the risk will be higher this century, and increasing with each century that technological progress continues. Because these anthropogenic risks outstrip all natural risks combined, they set the clock on how long humanity has left to pull back from the brink. I am not claiming that extinction is the inevitable conclusion of scientific progress, or even the most likely outcome. What I am claiming is that there has been a robust trend towards increases in the power of humanity, which has reached a point where we pose a serious risk to our own existence. How we react to this risk is up to us. Nor am I arguing against technology. Technology has proved itself immensely valuable in improving the human condition. The problem is not so much an excess of technology as a lack of wisdom. Carl Sagan put this especially well: “Many of the dangers we face indeed arise from science and technology – but, more fundamentally, because we have become powerful without becoming commensurately wise. The world-altering powers that technology has delivered into our hands now require a degree of consideration and foresight that has never before been asked of us.” Because we cannot come back from extinction, we cannot wait until a threat strikes before acting – we must be proactive. And because gaining wisdom takes time, we need to start now. I think that we are likely to make it through this period. Not because the challenges are small, but because we will rise to them. The very fact that these risks stem from human action shows us that human action can address them. Defeatism would be both unwarranted and counterproductive – a self-fulfilling prophecy. Instead, we must address these challenges head-on with clear and rigorous thinking, guided by a positive vision of the longterm future we are trying to protect.

### Solvency

#### Thus, the plan: The member nations of the World Trade Organization should reduce intellectual property protections of medicines during pandemics.

#### The aff solves this and future pandemics without killing innovation – it’s the best middle ground.

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Brink Lindsey, “Why intellectual property and pandemics don’t mix,” Brookings, <https://www.brookings.edu/blog/up-front/2021/06/03/why-intellectual-property-and-pandemics-dont-mix/> // sam :)

On May 5 the Biden administration announced that it would support waiving intellectual property protections for COVID-19 vaccines under the World Trade Organization’s Agreement on Trade-Related Intellectual Property Rights (TRIPS). Predictably, the move drew fiery condemnation from drug companies. In addition, many disinterested observers criticized the support for a TRIPS waiver as empty symbolism, arguing that vaccine patents are not the major obstacle hindering the currently flagging drive to make vaccines available around the world. Waiving patent protections is certainly no panacea. What is needed most urgently is a massive drive of technology transfer, capacity expansion, and supply line coordination to bring vaccine supply in line with global demand. Dispensing with patents in no way obviates the need for governments to fund and oversee this effort. Although focusing on these immediate constraints is vital, we cannot confine our attention to the short term. First of all, the COVID-19 pandemic is far from over. Although Americans can now see the light at the end of the tunnel thanks to the rapid rollout of vaccines, most of the world isn’t so lucky. The virus is currently raging in India and throughout South America, overwhelming health care systems and inflicting suffering and loss on a horrific scale. And consider the fact that Australia, which has been successful in suppressing the virus, recently announced it was sticking to plans to keep its borders closed until mid-2022. Criticisms of the TRIPS waiver that focus only on the next few months are therefore short-sighted: this pandemic could well drag on long enough for elimination of patent restrictions to enable new vaccine producers to make a positive difference. Furthermore, and probably even more important, this is almost certainly not the last pandemic we will face. Urbanization, the spread of factory-farming methods, and globalization all combine to increase the odds that a new virus will make the jump from animals to humans and then spread rapidly around the world. Prior to the current pandemic, the 21st century already saw outbreaks of SARS, H1N1, MERS, and Ebola. Everything we do and learn in the current crisis should be viewed from the perspective of getting ready for next time. THE NATURE OF THE PATENT BARGAIN When we take the longer view, we can see a fundamental mismatch between the policy design of intellectual property protection and the policy requirements of effective pandemic response. Although patent law, properly restrained, constitutes one important element of a well-designed national innovation system, the way it goes about encouraging technological progress is singularly ill-suited to the emergency conditions of a pandemic or other public health crisis. Securing a TRIPS waiver for COVID-19 vaccines and treatments would thus establish a salutary precedent that, in emergencies of this kind, governments should employ other, more direct means to incentivize the development of new drugs. Here is the basic bargain offered by patent law: encourage the creation of useful new ideas for the long run by slowing the diffusion of useful new ideas in the short run. The second half of the bargain, the half that imposes costs on society, comes from the temporary exclusive rights, or monopoly privileges, that a patent holder enjoys. Under U.S. patent law, for a period of 20 years nobody else can manufacture or sell the patented product without the permission of the patent holder. This allows the patent holder to block competitors from the market, or extract licensing fees before allowing them to enter, and consequently charge above-market prices to its customers. Patent rights thus slow the diffusion of a new invention by restricting output and raising prices. The imposition of these short-run costs, however, can bring net long-term benefits by sharpening the incentives to invent new products. In the absence of patent protection, the prospect of easy imitation by later market entrants can deter would-be innovators from incurring the up-front fixed costs of research and development. But with a guaranteed period of market exclusivity, inventors can proceed with greater confidence that they will be able to recoup their investment. For the tradeoff between costs and benefits to come out positive on net, patent law must strike the right balance. Exclusive rights should be valuable enough to encourage greater innovation, but not so easily granted or extensive in scope or term that this encouragement is outweighed by output restrictions on the patented product and discouragement of downstream innovations dependent on access to the patented technology. Unfortunately, the U.S. patent system at present is out of balance. Over the past few decades, the expansion of patentability to include software and business methods as well as a general relaxation of patenting requirements have led to wildly excessive growth in these temporary monopolies: the number of patents granted annually has skyrocketed roughly fivefold since the early 1980s. One unfortunate result has been the rise of “non-practicing entities,” better known as patent trolls: firms that make nothing themselves but buy up patent portfolios and monetize them through aggressive litigation. As a result, a law that is supposed to encourage innovation has turned into a legal minefield for many would-be innovators. In the pharmaceutical industry, firms have abused the law by piling up patents for trivial, therapeutically irrelevant “innovations” that allow them to extend their monopolies and keep raising prices long beyond the statutorily contemplated 20 years. Patent law is creating these unintended consequences because policymakers have been caught in an ideological fog that conflates “intellectual property” with actual property rights over physical objects. Enveloped in that fog, they regard any attempts to put limits on patent monopolies as attacks on private property and view ongoing expansions of patent privileges as necessary to keep innovation from grinding to a halt. In fact, patent law is a tool of regulatory policy with the usual tradeoffs between costs and benefits; like all tools, it can be misused, and as with all tools there are some jobs for which other tools are better suited. A well-designed patent system, in which benefits are maximized and costs kept to a minimum, is just one of various policy options that governments can employ to stimulate technological advance—including tax credits for R&D, prizes for targeted inventions, and direct government support. PUBLIC HEALTH EMERGENCIES AND DIRECT GOVERNMENT SUPPORT For pandemics and other public health emergencies, patents’ mix of costs and benefits is misaligned with what is needed for an effective policy response. The basic patent bargain, even when well struck, is to pay for more innovation down the road with slower diffusion of innovation today. In the context of a pandemic, that bargain is a bad one and should be rejected entirely. Here the imperative is to accelerate the diffusion of vaccines and other treatments, not slow it down. Giving drug companies the power to hold things up by blocking competitors and raising prices pushes in the completely wrong direction. What approach to encouraging innovation should we take instead? How do we incentivize drug makers to undertake the hefty R&D costs to develop new vaccines without giving them exclusive rights over their production and sale? The most effective approach during a public health crisis is direct government support: public funding of R&D, advance purchase commitments by the government to buy large numbers of doses at set prices, and other, related payouts. And when we pay drug makers, we should not hesitate to pay generously, even extravagantly: we want to offer drug companies big profits so that they prioritize this work above everything else, and so that they are ready and eager to come to the rescue again the next time there’s a crisis. It was direct support via Operation Warp Speed that made possible the astonishingly rapid development of COVID-19 vaccines and then facilitated a relatively rapid rollout of vaccine distribution (relative, that is, to most of the rest of the world). And it’s worth noting that a major reason for the faster rollout here and in the United Kingdom compared to the European Union was the latter’s misguided penny-pinching. The EU bargained hard with firms to keep vaccine prices low, and as a result their citizens ended up in the back of the queue as various supply line kinks were being ironed out. This is particularly ironic since the Pfizer-BioNTech vaccine was developed in Germany. As this fact underscores, the chief advantage of direct support isn’t to “get tough” with drug firms and keep a lid on their profits. Instead, it is to accelerate the end of the public health emergency by making sure drug makers profit handsomely from doing the right thing. Patent law and direct support should be seen not as either-or alternatives but as complements that apply different incentives to different circumstances and time horizons. Patent law provides a decentralized system for encouraging innovation. The government doesn’t presume to tell the industry which new drugs are needed; it simply incentivizes the development of whatever new drugs that pharmaceutical firms can come up with by offering them a temporary monopoly. It is important to note that patent law’s incentives offer no commercial guarantees. Yes, you can block other competitors for a number of years, but that still doesn’t ensure enough consumer demand for the new product to make it profitable. DIRECT SUPPORT MAKES PATENTS REDUNDANT The situation is different in a pandemic. Here the government knows exactly what it wants to incentivize: the creation of vaccines to prevent the spread of a specific virus and other drugs to treat that virus. Under these circumstances, the decentralized approach isn’t good enough. There is no time to sit back and let drug makers take the initiative on their own timeline. Instead, the government needs to be more involved to incentivize specific innovations now. As recompense for letting it call the shots (pardon the pun), the government sweetens the deal for drug companies by insulating them from commercial risk. If pharmaceutical firms develop effective vaccines and therapies, the government will buy large, predetermined quantities at prices set high enough to guarantee a healthy return. For the pharmaceutical industry, it is useful to conceive of patent law as the default regime for innovation promotion. It improves pharmaceutical companies’ incentives to develop new drugs while leaving them free to decide which new drugs to pursue – and also leaving them to bear all commercial risk. In a pandemic or other emergency, however, it is appropriate to shift to the direct support regime, in which the government focuses efforts on one disease. In this regime, it is important to note, the government provides qualitatively superior incentives to those offered under patent law. Not only does it offer public funding to cover the up-front costs of drug development, but it also provides advance purchase commitments that guarantee a healthy return. It should therefore be clear that the pharmaceutical industry has no legitimate basis for objecting to a TRIPS waiver. Since, because of the public health crisis, drug makers now qualify for the superior benefits of direct government support, they no longer need the default benefits of patent support. Arguments that a TRIPS waiver would deprive drug makers of the incentives they need to keep developing new drugs, when they are presently receiving the most favorable incentives available, can be dismissed as the worst sort of special pleading. That said, it is a serious mistake to try to cast the current crisis as a morality play in which drug makers wear the black hats and the choice at hand is between private profits and public health. We would have no chance of beating this virus without the formidable organizational capabilities of the pharmaceutical industry, and providing the appropriate incentives is essential to ensure that the industry plays its necessary and vital role. It is misguided to lament that private companies are profiting in the current crisis: those profits are a drop in the bucket compared to the staggering cost of this pandemic in lives and economic damage.

**Removing IP protections will increase production, diversify supply, and spur innovations that protect against future pandemics**

**Human Rights Watch 6-3**-21 https://www.hrw.org/news/2021/06/03/seven-reasons-eu-wrong-oppose-trips-waiver#

Intellectual property is currently a barrier to swiftly scaling up and diversifying the production of Covid-19 health products, including vaccines. The European Commission claims that intellectual property (IP) is not a barrier to scaling up the manufacturing of vaccines or other health products needed for the Covid-19 response, suggesting that sharing IP would not immediately speed up manufacturing. Right now, there are manufacturers with capacity to produce additional Covid-19 vaccines and other health products at factories in Bangladesh, Canada, Denmark, India, and Israel, but they are unable to contribute because they do not yet have the right licenses. So, IP is a barrier to them. The TRIPS waiver proposal sponsors and experts at the leading science journal Nature, Médecins Sans Frontières (MSF) Access Campaign, the Third World Network, and others have presented many other concrete examples of how enforcement of IP rules blocked, delayed, or limited production of chemical reagents for Covid-19 tests, ventilator valves, Covid-19 treatments, and elements of Covid-19 vaccines. IP constraints have not only led to vaccine shortages but have also led to shortages of key raw materials like bioreactor bags and filters. Rather than manufacturers being held back by an inherent lack of manufacturing and technological capability, studies have shown that transnational claims to IP impede new manufacturers from entering and competing in the market. The same dynamics are playing out today with Covid-19. Even though a waiver will not automatically expand production overnight, it paves the way for **speedy technology transfers and manufacturing.** The waiver by itself will not automatically result in widespread and diversified manufacturing, but it will ease complex global rules governing IP and exports and give governments freedom to collaborate on technology transfers and exports without fearing trade-based retaliation. It will help reduce the dependence on any one country or region for medical products and mitigate the risks of export restrictions. With new variants emerging and some evidence that repeat vaccine boosters may be needed, the waiver will enable governments around the world to be prepared for **a long-term response** to Covid-19. Experts have mapped out plans for how the manufacturing of mRNA and other vaccines, could be dramatically expanded in a relatively short period of time. Waiving certain IP rules in the TRIPS agreement over the next three years could help create diverse regional manufacturing hubs and protect the EU and the rest of the world **from future pandemics**, supply chain disruptions, and **resulting economic disaster.** Concerns that widening the universe of producers may lower or compromise quality standards are unfounded because stringent regulatory authorities and the World Health Organization (WHO) would continue to play their existing role as arbiters of quality and safety for vaccines, which have a very stringent process for approval.

#### Status quo medical innovation results in inequality, which the aff corrects.

Parthasarathy 20 – Shobita Parthasarathy is Professor of Public Policy and Director of the Science, Technology, and Public Policy Program at University of Michigan. (“Innovation Policy, Structural Inequality, and COVID-19,” 2020, pg. 105-107) julian

The private sector then capitalizes on the results of this scientific curiosity to develop socially beneficial technologies, which are made available in the marketplace. Key to this is the modern patent system: the government incentivizes inventors by providing them with patent rights, to commercialize and profit from their new technologies exclusively and for a limited period of time (Parthasarathy 2017). The US Congress reinforced the links among government funding, university science, and the marketplace with the 1980 Bayh-Dole Act, which allowed universities to retain the rights to patents on inventions created through government-funded research (Popp Berman 2012). The more inventions were patented and made available to the private sector, the logic went, the more technology would be available to the public. Today, increasingly cash-strapped universities encourage their researchers to patent inventions, and license these patents to private companies who will develop and commercialize them (Kleinman 2003). As a result, there has been a sharp rise in US patents granted, and high-tech industries have blossomed. And countries across the world have adopted these innovation policies, seeking to replicate the US approach (Siepmann 2004).

But the COVID-19 crisis has shown us that these innovation policies do not serve citizens equally, in at least three ways:

(1) Minimal Funding for Health Disparities Research. The US approach to research funding has left us unprepared for and unable to manage the disproportionate health impacts of the virus among people of color, especially Black communities. The NIH, the world’s largest public funder of biomedical research, devotes little money to this subject. One analysis found that it spends 500 times more on genetics research as on structural racism and its impacts on health (Krieger 2005). This is not surprising in a system where scientists drive funding priorities, and where investigators from historically disadvantaged minority groups struggle to receive funding. The needs and concerns of disadvantaged minorities may seem less important or urgent to most scientists (Shavers et al. 2005). But this scarcity has left us without the evidence to understand why communities of color are disproportionately suffering and dying from COVID-19, or what steps to take to address this imbalance.

2) Uncoordinated Research and Development Creates Uneven Access to Diagnostic Testing. Absent the “rigid controls” that Bush dismissed, the US innovation system is highly decentralized and market-driven. So, diagnostic testing for SARS-CoV-2 (the virus that causes COVID-19) has been essentially impossible to coordinate. Traditionally, the Centers for Disease Control and Prevention and public laboratories funded by state and local governments lead infectious disease surveillance, but they have limited capacity (Crawford et al. 2010). The COVID-19 pandemic created demand that far outstripped what these laboratories could provide, but there was no systematic way to expand capacity. A variety of laboratories, including at universities, stepped up, but it remains difficult to connect supply and demand (Maxmen 2020). Different electronic records platforms cannot communicate. Some hospitals have exclusive partnerships with big commercial laboratories. And, even as testing has become more available, white and higher income communities gain access more easily (McMinn et al. 2020).

By contrast, South Korea has been widely praised for its SAR-CoV-2 testing strategy (Thompson 2020). Three weeks after the Chinese government shared the virus’s genome sequence on January 12, the South Korean government approved multiple diagnostic tests developed by its biotechnology sector (The Government of the Republic of Korea 2020). The country’s National Health Insurance Corporation purchased and distributed them. Ultimately, testing was plentiful and widespread, and the government implemented a companion contact-tracing program that minimized the number of COVID-19 cases and deaths.

Certainly, South Korea has learned from its experiences with previous coronaviruses, and benefits from a nationally coordinated healthcare system. But the rapid and straightforward development and distribution of diagnostic testing is also the result of a different approach to innovation policy than what the United States has taken up. Since the 1960s, South Korea’s government has played a major role in shaping research and development including in the industrial sector, by building capacity and setting priorities (Yim and Kim 2005). Government and industry have close professional ties and a sense of shared goals. In the years before COVID-19, for example, the South Korean government funded multiple companies developing viral diagnostic testing (The Government of the Republic of Korea 2020). With these relationships, technologies, and coordination with the healthcare system established, the government was able to immediately ask the private sector to develop SARS-CoV-2 tests. Three of the first five companies to receive emergency regulatory approval had received government funding for their diagnostics research. This proactive capacity building ensured that there was no need to ration testing, and therefore no inequality in access.

(3) Patent Policies Limit Access to Essential Technologies. While patents provide an incentive to innovate, the exclusive rights of commercialization they carry can make the most valuable technologies the most expensive. There is growing concern that COVID-19 treatments and vaccines will be priced out of reach for many, despite their importance for public health and economic recovery. Consider the case of remdesivir, a promising COVID-19 treatment developed with the help of US government and university scientists but which biotechnology company Gilead Sciences has patented and commercialized (Ardizzone 2020). Gilead has a long history of charging high prices for its patented drugs, including hepatitis C drug Sovaldi which costs $84,000 for a 12-week course of treatment (Senior 2014). The company must now balance pressure from its investors against its interpretation of civic duty as it determines pricing for this promising COVID-19 drug.

#### Traditional patent law and IPP *legitimize* biopiracy’s control over dominated subjects, turning them into capital. We get rid of that and step in the right direction

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**Through biopiracy, outside corporations and nations can quickly take resources and secure their control through international intellectual property rights and patents.**

**The legitimation for these corporations stems from this westernized, neoliberal economy and the reduction in trade barriers that benefits the wealthier areas of the world at the expense of marginalized peoples**. Power over these populations becomes normalized as a conception of power over dominated subjects. Indigenous communities are generally smaller populations that remain on the margins within the nation-state until they are found to have economic value. Peripheral governance then becomes more pervasive in their lives under neoliberalism and the erosion of international trade barriers and increases in foreign investors. Under neoliberalism, market rationality is extended to all aspects of life. According to Wendy Brown, and her reading of Weber, there is nothing outside of the market. This is a system that allows for transnational entities to have greater control than individual sovereignties. The deregulation of the market, the elimination of tariffs and social safety nets, and an increase in the decimation of the environment and marginalized cultures are all hallmarks of neoliberalism.xvii **When societies and their traditional resources are incorporated into the economy, they become a form of capital**. Essentially, in relation to resources and traditional knowledge, neoliberalism’s desire for profit creates a political tension between national interests and globalized capital.xviii

### Framing

#### The standard is maximizing expected wellbeing

#### Only pain and pleasure are intrinsically good or bad – everything else collapses.

Moen 16 [Ole Martin Moen, Research Fellow in Philosophy at University of Oslo “An Argument for Hedonism” Journal of Value Inquiry (Springer), 50 (2) 2016: 267–281]

Let us start by observing, empirically, that a widely shared judgment about intrinsic value and disvalue is that pleasure is intrinsically valuable and pain is intrinsically disvaluable. On virtually any proposed list of intrinsic values and disvalues (we will look at some of them below), pleasure is included among the intrinsic values and pain among the intrinsic disvalues. This inclusion makes intuitive sense, moreover, for there is something undeniably good about the way pleasure feels and something undeniably bad about the way pain feels, and neither the goodness of pleasure nor the badness of pain seems to be exhausted by the further effects that these experiences might have. “Pleasure” and “pain” are here understood inclusively, as encompassing anything hedonically positive and anything hedonically negative.2 The special value statuses of pleasure and pain are manifested in how we treat these experiences in our everyday reasoning about values. If you tell me that you are heading for the convenience store, I might ask: “What for?” This is a reasonable question, for when you go to the convenience store you usually do so, not merely for the sake of going to the convenience store, but for the sake of achieving something further that you deem to be valuable. You might answer, for example: “To buy soda.” This answer makes sense, for soda is a nice thing and you can get it at the convenience store. I might further inquire, however: “What is buying the soda good for?” This further question can also be a reasonable one, for it need not be obvious why you want the soda. You might answer: “Well, I want it for the pleasure of drinking it.” If I then proceed by asking “But what is the pleasure of drinking the soda good for?” the discussion is likely to reach an awkward end. The reason is that the pleasure is not good for anything further; it is simply that for which going to the convenience store and buying the soda is good.3 As Aristotle observes: “We never ask [a man] what his end is in being pleased, because we assume that pleasure is choice worthy in itself.”4 Presumably, a similar story can be told in the case of pains, for if someone says “This is painful!” we never respond by asking: “And why is that a problem?” We take for granted that if something is painful, we have a sufficient explanation of why it is bad. If we are onto something in our everyday reasoning about values, it seems that pleasure and pain are both places where we reach the end of the line in matters of value.

#### Extinction is a unique ontological phenomenon that outweighs under every ethical theory.

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8. Global ethics must respond to mass extinction. In late 2014, the Worldwide Fund for Nature reported a startling statistic: according to their global study, 52% of species had gone extinct between 1970 and 2010.60 This is not news: for three decades, conservation biologists have been warning of a ‘sixth mass extinction’, which, by definition, could eliminate more than three quarters of currently existing life forms in just a few centuries.61 In other words, it could threaten the practical possibility of the survival of earthly life. Mass extinction is not simply extinction (or death) writ large: it is a qualitatively different phenomena that demands its own ethical categories. It cannot be grasped by aggregating species extinctions, let alone the deaths of individual organisms. Not only does it erase diverse, irreplaceable life forms, their unique histories and open-ended possibilities, but it threatens the ontological conditions of Earthly life.

IR is one of few disciplines that is explicitly devoted to the pursuit of survival, yet it has almost nothing to say in the face of a possible mass extinction event.62 It utterly lacks the conceptual and ethical frameworks necessary to foster diverse, meaningful responses to this phenomenon. As mentioned above, Cold-War era concepts such as ‘nuclear winter’ and ‘omnicide’ gesture towards harms massive in their scale and moral horror. However, they are asymptotic: they imagine nightmares of a severely denuded planet, yet they do not contemplate the comprehensive negation that a mass extinction event entails. In contemporary IR discourses, where it appears at all, extinction is treated as a problem of scientific management and biopolitical control aimed at securing existing human lifestyles.63 Once again, this approach fails to recognise the reality of extinction, which is a matter of being and nonbeing, not one of life and death processes.

Confronting the enormity of a possible mass extinction event requires a total overhaul of human perceptions of what is at stake in the disruption of the conditions of Earthly life. The question of what is ‘lost’ in extinction has, since the inception of the concept of ‘conservation’, been addressed in terms of financial cost and economic liabilities.64 Beyond reducing life to forms to capital, currencies and financial instruments, the dominant neoliberal political economy of conservation imposes a homogenising, Western secular worldview on a planetary phenomenon. Yet the enormity, complexity, and scale of mass extinction is so huge that humans need to draw on every possible resource in order to find ways of responding. This means that they need to mobilise multiple worldviews and lifeways – including those emerging from indigenous and marginalised cosmologies. Above all, it is crucial and urgent to realise that extinction is a matter of global ethics. It is not simply an issue of management or security, or even of particular visions of the good life. Instead, it is about staking a claim as to the goodness of life itself. If it does not fit within the existing parameters of global ethics, then it is these boundaries that need to change.

9. An Earth-worldly politics. Humans are worldly – that is, we are fundamentally worldforming and embedded in multiple worlds that traverse the Earth. However, the Earth is not ‘our’ world, as the grand theories of IR, and some accounts of the Anthropocene have it – an object and possession to be appropriated, circumnavigated, instrumentalised and englobed.65 Rather, it is a complex of worlds that we share, co-constitute, create, destroy and inhabit with countless other life forms and beings.

The formation of the Anthropocene reflects a particular type of worlding, one in which the Earth is treated as raw material for the creation of a world tailored to human needs. Heidegger famously framed ‘earth’ and ‘world’ as two countervailing, conflicting forces that constrain and shape one another. We contend that existing political, economic and social conditions have pushed human worlding so far to one extreme that it has become almost entirely detached from the conditions of the Earth. Planet Politics calls, instead, for a mode of worlding that is responsive to, and grounded in, the Earth. One of these ways of being Earth-worldly is to embrace the condition of being entangled. We can interpret this term in the way that Heidegger66 did, as the condition of being mired in everyday human concerns, worries, and anxiety, to prolong existence. But, in contrast, we can and should reframe it as authors like Karen Barad67 and Donna Haraway68 have done. To them and many others, ‘entanglement’ is a radical, indeed fundamental condition of being-with, or, as Jean-Luc Nancy puts it, ‘being singular plural’.69 This means that no being is truly autonomous or separate, whether at the scale of international politics or of quantum physics. World itself is singular plural: what humans tend to refer to as ‘the’ world is actually a multiplicity of worlds at various scales that intersect, overlap, conflict, emerge as they surge across the Earth. World emerges from the poetics of existence, the collision of energy and matter, the tumult of agencies, the fusion and diffusion of bonds.

Worlds erupt from, and consist in, the intersection of diverse forms of being – material and intangible, organic and inorganic, ‘living’ and ‘nonliving’. Because of the tumultuousness of the Earth with which they are entangled, ‘worlds’ are not static, rigid or permanent. They are permeable and fluid. They can be created, modified – and, of course, destroyed. Concepts of violence, harm and (in)security that focus only on humans ignore at their peril the destruction and severance of worlds,70 which undermines the conditions of plurality that enables life on Earth to thrive.

#### Util is lexically prior – in order for agents to be able to engage in complex moral deliberations they must first be safe and not in danger of death – that means materially reducing violence outweighs.

#### Actor specificity – side constraints make action impossible because government policies always require trade-offs and involve the actions of multiple agents with conflicting moral obligations—the way to resolve those conflicts is by benefiting everyone. Different agents have different ethical obligations – even if they win a theory of personal moral imperatives its fundamentally different then the states obligations.

#### No intent-foresight distinction – foreseeable consequences of an action are intrinsic to an action – i.e. if I give an apple to you knowing its rotten then I’m responsible for you getting sick because I knew the consequences would happen and therefore intended them to happen. That means that voting neg despite foreseeing the consequences of the affirmative is intrinsically bad.

#### Aff gets 1AR theory – otherwise the neg can be infinitely abusive and there’s no way to check back. 1AR theory is drop the debater, competing interps, and the highest layer of the round – the 1ARs too short to be able to rectify abuse and adequately cover substance. No RVI or 2N theory because you have 6 minutes to go for them whereas I only have a 3 minute 2AR to respond so I get crushed on time skew.