# 1

#### The United States federal government should commit to purchasing sufficient doses of COVID-19 vaccines to meet global demand and establish public-private partnerships to expand global vaccine manufacturing capacity.

#### Buying and exporting vaccines solves while avoiding the innovation DA.

Gianna Gancia 21, (IT, ID) is a member of Parliament’s Development Committee, “Why waiving patents on vaccines is not a good idea,” Parliament Magazine, 5-14-2021, https://www.theparliamentmagazine.eu/news/article/why-waiving-patents-on-vaccines-is-not-a-good-idea

In fact, there would be no incentive for pharmaceutical companies to conduct research, not only into COVID-19 (let's not forget that much still needs to be done to achieve an effective and minimally invasive therapeutic treatment in case of infection and severe symptoms) but also for future pandemic crises that, in a globalised world, are unfortunately entirely predictable. But the negative effects would not stop with pandemic crises. What would happen if one day, hopefully very near, an extremely effective anti-cancer drug was discovered by a pharmaceutical company? Would patents be suspended yet again? It is obvious that investment in cancer drug research would be drastically reduced. I strongly believe that the US position is short-sighted in this case, and to align with it would mean thwarting efforts to build an autonomous, strategic, and resilient European pharmaceutical sector. Such a decision would strongly disincentivise private investors and would effectively undermine the European sector's ability to be a world leader in research. We must remember that the United States has contributed very marginally to the export of vaccine doses, unlike the European Union which has exported 200 million doses, as many as the US has administered to its own citizens. Suspending the patents is a very hypocritical decision. If the United States really wants to help eradicate the virus from the world, the only thing they have to do is heavily subsidise, with public money, the production of a large number of vaccines by their pharmaceutical companies. “Giving” the patent to these countries is a cynical way of appearing good and humanitarian, without contributing in any way to actually helping them.

# 2

#### Status quo market dynamics are solving the pandemic now – upending IP undoes all that progress without removing any roadblocks.

David J. Kappos, 21, partner, Cravath, Swaine & Moore LLP, “Opinion,” NBC News, 5-25-2021, https://www.nbcnews.com/think/opinion/waiving-covid-19-vaccine-patents-won-t-get-shots-arms-ncna1268099

WTO director-general Ngozi Okonjo-Iweala said on Friday that a full waiver of companies' Covid-19 vaccine patents under the World Trade Organization's auspices — sought by many developing countries and supported by President Joe Biden to combat disproportionate access to the therapies — will not be enough to speed up the provision of vaccines to countries where it is lagging. On that small point, at least, we agree: The nations that spearheaded the petition to waive the patent rights at the WTO, India and South Africa, have been unable to provide any evidence that the international system of respecting intellectual property rights under the law have impeded the development, production or distribution of Covid-19 vaccines and treatments. And it is hard to imagine that any such evidence will be forthcoming, as intellectual property is facilitating — not inhibiting — the pharmaceutical industry's pandemic response. Normally fierce rival companies have been able to cooperate on vaccine production precisely because inventors know their property rights are — and will remain — secure. For instance, Johnson & Johnson invited Merck to help manufacture its viral-vector vaccine, while Pfizer and BioNTech, which jointly developed their revolutionary mRNA vaccine, are similarly working with French drug giant Sanofi to boost its production. And generics manufacturers are already working around the clock on a contract basis with innovator firms to produce vaccines. For instance, India's largest generics manufacturer, the Serum Institute, is producing billions of doses of the AstraZeneca vaccine for low-income countries, while South Africa's largest generics firm, Aspen Pharmacare, is producing hundreds of millions of doses of Johnson & Johnson's vaccine. India and South Africa's petition to nullify intellectual property protections, were it to have been in effect, would have made those collaborations impossible. Suspending intellectual property rights will not get shots in arms any faster at this point and would, in fact, undermine efforts to scale up vaccine production. As Okonjo-Iweala herself pointed out last week, though it will take time to negotiate a wholesale change to WTO treaties, the capacity to manufacture Covid-19 vaccines already exists in Pakistan, Bangladesh, Indonesia, Thailand, Senegal and South Africa but is currently sitting idle despite existing frameworks giving manufacturers in those places the right to start. The EU, in the meantime, has offered a counterproposal to waive or minimize export restrictions on vaccines and vaccine components, to pledge to supply vaccines to countries with shortages at cost and to allow more countries to take advantage of existing WTO rules that allow countries to license intellectual property without the consent of the patent holders, essentially allowing for an increasing production capacity without waiving the patent rights altogether. So while the appeal of an intellectual property waiver is tempting in the short-run, doing so imperils our ability to develop new medicines and combat future pandemics. The Biden administration, however, announced its support for such a petition earlier in May and progressive groups cheered, contending that the intellectual property suspension would hasten and make more equitable the global vaccine rollout by enabling more manufacturers to produce the vaccines developed by Western firms. And, certainly, the rapid and equitable distribution of Covid-19 vaccines is absolutely critical to ending this pandemic. But sacrificing the innovation ecosystem in order to achieve this end would be myopic policy. There are already very real challenges to inoculating the world, including a widespread lack of proper refrigeration (let alone the ultracold storage required for some vaccines), a shortage of trained professionals to administer them and conduct follow-up evaluations, and a lack of patient compliance with the two-dose regimen for the Pfizer-BioNTech and Moderna jabs. Plus, there have already been issues with fakes and a lack of trust in the government that have come into play. In Mexico and Poland, authorities have identified counterfeit versions of the Pfizer-BioNTech vaccine. In Malawi, the New York Times reported that "people are asking doctors how to flush the AstraZeneca vaccine from their bodies." Suspending intellectual property rights will not remove any of these roadblocks and would likely exacerbate them. Without certain quality controls implemented by original patent holders, especially in places with existing levels of government or industrial corruption, we could see ineffective vaccines manufactured using substandard processes, and then administered without adequate refrigeration, professional handling or required counseling and follow up. In this moment, leaders and policymakers in the developed world should focus their efforts on helping other nations overcome these challenges, rather than debating the finer points of intellectual property law at the WTO. The latter is a waste of precious time, especially since without intellectual property protections, there might never have been vaccines to debate — at least not yet. Take Moderna's vaccine: A mere two days after Chinese authorities publicly disclosed Covid-19's genetic sequence in January 2020, Moderna had already sequenced its vaccine candidate, mRNA-1273 — which ultimately proved 94.5 percent effective and became one of the first vaccines approved for emergency use in the United States and the European Union. (By way of comparison, the creation of viable vaccines for smallpox, chickenpox, typhoid fever and polio took decades.) Moderna's Covid-19 vaccine was the result of 10 years of work, which took at least $2 billion from investors. Investors were willing to support Moderna for so many years — and potentially lose billions in the process — because they knew both that its technology could revolutionize medicine and that the technology would be protected by intellectual property rules. Investments in Moderna paid off — but only 12 percent of investigational medicines entering clinical trials are ultimately approved by the U.S. Food and Drug Association. As the average cost of developing a new drug approaches $3 billion, it's clear that no firm would conduct research and development without the promise of intellectual property rights, which give companies exclusive ownership of their inventions and a chance to recoup the investments that made the drug possible. Moderna's success should be a clear lesson for every policymaker: Swift global public health responses to the pandemics of tomorrow are predicated on incentivizing research and clinical development of new drug candidates and clinical pathways today. The explosion of biopharma research — and the number of novel drugs brought to market to combat Covid-19 — are directly linked to a strong system of intellectual property rights. The WTO waiver on patent rights for Covid-19 vaccines — let alone requirements for broader technology transfers, which Okonjo-Iweala appeared to call for on Friday — could shatter this system. It is unrealistic to assume groundbreaking innovations will simply appear without solid and reliable protections for those who risk the time and money to develop them.

#### The plan sets a precedent that IP means nothing – that dooms long term biopharma innovation.

Peter J. Pitts 21, former associate commissioner of the FDA, is president of the Center for Medicine in the Public Interest, “Waiving Covid-19 Vaccine Patents Is a Bad Idea and Sets a Dangerous Precedent,” 6-21-2021, https://medecon.org/waiving-covid-19-vaccine-patents-is-a-bad-idea-and-sets-a-dangerous-precedent/

It all sounds so simple: to hasten the end of the pandemic globally, suspend intellectual property protections on Covid-19 vaccines to allow swift production of low-cost copies the world over. The Biden administration has bought into exactly that strategy at the World Trade Organization.

But some simple ideas are also simplistic, and this one is dangerously so. Waiving patent rights for Covid-19 vaccines will actually slow their availability in the developing world, thereby prolonging the pandemic. The production of these breakthrough Covid-19 vaccines requires sophisticated processes, procedures, staff training, material, and manufacturing. Under typical patent-protected arrangements for new global production facilities, patent-holders voluntarily license their product information to qualified third party-manufacturers. The patent-owners work closely with the licensees to stand up facilities that meet rigorous technological specifications and standards for safety. Even under ideal conditions, it can take a year or longer to build out this infrastructure the right way. The WTO waiver blows up this careful process by allowing pretty much anyone to go into the business of producing Covid-19 vaccines. Suddenly, it’s the wild west out there, with legitimate producers trying to compete with aggressive cost and corner-cutters, to say nothing of the outright fraud that has long driven the lucrative counterfeit drug trade. All the research demonstrating the safety and efficacy of the Covid-19 vaccines goes out the window under such conditions. Nor is such a process going to produce faster results. Historically, under compulsory rather than voluntary licensing arrangements, it has taken even legitimate generic manufacturers years to receive the formulas, work out logistical challenges, and scale up production. In one case of compulsory licensing, it took over four years to bring a generic AIDS drug to Rwanda. The World Health Organization regularly publishes a list of “essential” medications, the vast majority of which patent protections have long expired. Any generic manufacturer can therefore set itself up producing them. Yet the WHO reports that availability of these medicines in many parts of the developing world remains spotty, at best. The quality of many of these essential medicines is also questionable. Yet none of the drugs on the WHO list are in the same universe of complexity as the Covid-19 vaccines. The patent system is not the problem here. But, some ask, why should private companies enjoy the property rights to innovation driven by government funding? This question likewise misses the mark. In a study of 478 drugs less than 10 percent had a public-sector patent associated with it. While providing no gain, compulsory licensing promises lots of pain. Shunting aside patent and intellectual property rights sends a dangerous signal to innovative biopharmaceutical companies and their investors. Biopharmaceutical research is risky. It costs almost $3 billion, on average, to bring a single medicine to pharmacy shelves. Biotech investors take these risks because of strong patent protection like those in the United States. Scientists in America now develop over half of all new drugs worldwide. It’s important to understand the current advocacy for a “temporary” IP waiver. A small but vocal and influential public health policy cohort believes that IP protections are the most significant cause of global healthcare disparities. Their philosophies repeat and reinforce many misconceptions about the problem of improving global access to medicines. The reality is that, in order to save the world, we must all work together as partners. A free-market healthcare paradigm for drug development, although far from perfect, works. A well-appointed armamentarium of Covid-19 diagnostic tools, therapeutics, and vaccines – all invented in under one year, speaks to the power of today’s innovation ecosystem. That ecosystem is built on IP protections. Right now, under voluntary licensing, global production capacity for Covid vaccines and treatments is expanding and accelerating. A move to nullify IP will not result in a single resident of the developing world getting vaccinated one minute sooner.

#### Bioengineering is key to solve climate collapse and pandemics—extinction

Baum 13 (Seth D. Baum\* and Grant S. Wilson Global Catastrophic Risk Institute \* ‘The Ethics of Global Catastrophic Risk from Dual-Use Bioengineering’ Ethics in Biology, Engineering and Medicine, 4(1):59-72 (2013). Pg lexis)

Note: “GCR”: Global Catastrophic Risk

In addition to itself being a GCR, bioengineering can also reduce the chances that other GCRs will occur. One such GCR is climate change. Catastrophic climate change scenarios could involve sea level rise of up to 10 meters, droughts, increased extreme weather events, loss of most threatened and endangered species, and temperature increases of 6 degrees Celsius.37 Still worse than that would be outcomes in which large portions of the land surface on Earth become too warm for mammals (including humans) to survive.38 And the worst scenario could involve climate engineering backfiring to result in extremely rapid temperature increase.39 6 Despite the risks of climate change, the international community has struggled to satisfactorily address the issue, for a variety of political, technological, and economical reasons. Bioengineering may be able to help. An army of bioengineered algae that is specifically designed to convert carbon dioxide into a “biocrude” fuel ready to be made into fuel for any vehicle type – a technology that Craig Venter’s Synthetic Genomics, Inc. is developing with a $600 million investment from ExxonMobil – could remove greenhouse gases from the atmosphere and provide a plentiful, carbon-neutral fuel source that does not pose many of the downsides of today’s biofuel options (although this technology has its own risks).40 Or, despite being a bizarre proposition, humans could be genetically engineered to reduce our CO2 output, such as by engineering humans to be intolerant to meat or to be smaller in size.41 Likewise, while a deadly bioengineered virus has the potential to escape from a laboratory and cause a global catastrophe, such research may be necessary to create vaccines for viruses that could cause worldwide pandemics. For example, the Influenza Pandemic of 1918-1919 (the Spanish flu) killed about 50 million people worldwide.42 Would modern bioengineering technology have been able to avoid this global catastrophe? In fact, researchers justified the airborne H5N1 virus, discussed above, as helping to prevent the spread of a similar strain that could mutate naturally. Overall, there is a dynamic relationship between bioengineering and other GCRs that should be assessed when considering how to respond to these risks.

#### Waivers undermine safety which makes the pandemic worse.

Mark McClellan 21, MD, PhD, “Reducing Global COVID Vaccine Shortages: New Research and Recommendations for US Leadership,” 4-15-2021, https://healthpolicy.duke.edu/sites/default/files/2021-04/US%20Vaccine%20Access%20Leadership.pdf

To address global access to COVID-19 vaccines and therapies under emergent circumstances, India, South Africa, and other nations have moved to temporarily waive World Trade Organization (WTO) provisions under the Agreement on Trade-Related Aspects of Intellectual While genuine and well-intentioned proponents of this waiver believe it will remove a significant barrier to increasing production and access, major scale-up of safe and reliable vaccine manufacturing requires overcoming a range of other challenges. Without ensuring adequate supply of key ingredients (e.g., lipids, vials, bags for bioreactors, etc.), new efforts would likely complicate the fulfillment of existing contracts for authorized vaccines. High-quality vaccine manufacturing is complex, requiring extensive technical knowhow and high-quality regulatory oversight, and experienced manufacturers will not participate without a no-fault compensation scheme to protect vaccine users in case of a serious adverse event. The unintended result could be less effective pandemic control, either because of compromised effectiveness of such vaccines or compromised public confidence in vaccination, leading to greater outbreaks and more variants. Global vaccine supply must be scaled up rapidly, without compromising safety or quality. WTO Director General Ngozi Okonjo-Iweala has proposed a “third way” alternative to a TRIPS waiver or direct vaccine supply. While not yet fully developed, this could include use of voluntary licensing arrangements to increase manufacturing capacity. Such arrangements would involve public-private partnerships that assure the transfer and use of the manufacturing quality knowhow needed for timely production of safe and effective vaccines. Similar models are already being implemented in India, Thailand, and elsewhere, through public-private partnerships with support from private philanthropy and investment of private capital.

# 3

#### China is using vaccine diplomacy to cement global leadership – the plan reverses this

Purvaja Modak 21, FDI Associate, “China’s Vaccine Diplomacy, the “Health Silk Road” and a Global Pledge,” Future Directions International, 7-15-2021, https://www.futuredirections.org.au/publication/chinas-vaccine-diplomacy-the-health-silk-road-and-a-global-pledge/

Since late 2020, China has promised vaccines to more than 80 countries under its “Health Silk Road” initiative, an emerging diplomatic initiative to promote health co-operation. Those rollouts have faced scepticism, since the data on clinical trials have not been released for scientists to assess the efficacy of the vaccines. Critics of China’s so-called “vaccine diplomacy” do not view its efforts as an altruistic gesture. While China has indeed donated vaccines to a few countries, the majority have had to purchase their supplies, in some instances using loans offered by China to do so. China’s “vaccine diplomacy” is underpinned by geopolitical motivations. According to an April 2021 report by Think Global Health, of the 56 countries to which China pledged doses, 55 were participants in the BRI. That is China’s way of ensuring that those countries will remain indebted to Beijing and will continue to support and allow Chinese infrastructure and connectivity projects on their territories. That initiative has a secondary goal: China is now trying to give its pharmaceutical industry, which has been criticised for having low efficacy rates and poor credibility, a degree of legitimacy. China wishes to take its Sinovac and Sinopharm vaccines around the world to change those perceptions. To achieve its geopolitical objectives and regain its global standing, China has sought to provide its vaccines to countries of almost every continent. As the tables below demonstrate, China has managed to penetrate many countries despite suspicion about the efficacy of the vaccines and opaque data on its clinical trials. China’s COVID-19 vaccines have been shipped to more than 60 countries for emergency use, according to an official of the Chinese Commerce Ministry. It has supplied its vaccines to five countries in India’s neighbourhood, to 27 African countries, twelve countries in Western and Central Asia, twelve more in South-East Asia and the Pacific, fifteen countries in Latin America and signed agreements to supply its vaccines to over twenty more countries. On 2 June 2021, China’s Ministry of Foreign Affairs stated that China had provided ‘more than 350 million doses’ of vaccines to the international community by that date.

#### That’s necessary to solve a litany of global problems.

Shen Yamei 18, Deputy Director and Associate Research Fellow of Department for American Studies, China Institute of International Studies, 1-9-2018, "Probing into the “Chinese Solution” for the Transformation of Global Governance," CAIFC, http://www.caifc.org.cn/en/content.aspx?id=4491

As the world is in a period of great development, transformation and adjustment, the international power comparison is undergoing profound changes, global governance is reshuffling and traditional governance concepts and models are confronted with challenges. The international community is expecting China to play a bigger role in global governance, which has given birth to the Chinese solution. A. To Lead the Transformation of the Global Governance System. The “shortcomings” of the existing global governance system are prominent, which can hardly ensure global development. First, the traditional dominant forces are seriously imbalanced. The US and Europe that used to dominate the global governance system have been beset with structural problems, with their economic development stalling, social contradictions intensifying, populism and secessionism rising, and states trapped in internal strife and differentiation. These countries have not fully reformed and adjusted themselves well, but rather pointed their fingers at globalization and resorted to retreat for self-insurance or were busy with their own affairs without any wish or ability to participate in global governance, which has encouraged the growth of “anti-globalization” trend into an interference factor to global governance. Second, the global governance mechanism is relatively lagging behind. Over the years of development, the strength of emerging economies has increased dramatically, which has substantially upset the international power structure, as the developing countries as a whole have made 80 percent of the contributions to global economic growth. These countries have expressed their appeal for new governance and begun policy coordination among themselves, which has initiated the transition of global governance form “Western governance” to “East-West joint governance”, but the traditional governance mechanisms such as the World Bank, IMF and G7 failed to reflect the demand of the new pattern, in addition to their lack of representation and inclusiveness. Third, the global governance rules are developing in a fragmented way, with governance deficits existing in some key areas. With the diversification and in-depth integration of international interests, the domain of global governance has continued to expand, with actors multiplying by folds and action intentions becoming complicated. As relevant efforts are usually temporary and limited to specific partners or issues, global governance driven by requests of “diversified governance” lacks systematic and comprehensive solutions. Since the beginning of this year, there have been risks of running into an acephalous state in such key areas as global economic governance and climate change. Such emerging issues as nuclear security and international terrorism have suffered injustice because of power politics. The governance areas in deficit, such as cyber security, polar region and oceans, have “reversely forced” certain countries and organizations to respond hastily. All of these have made the global governance system trapped in a dilemma and call urgently for a clear direction of advancement. B. To Innovate and Perfect the International Order. Currently, whether the developing countries or the Western countries of Europe and the US are greatly discontent with the existing international order as well as their appeals and motivation for changing the order are unprecedentedly strong. The US is the major creator and beneficiary of the existing hegemonic order, but it is now doubtful that it has gained much less than lost from the existing order, faced with the difficulties of global economic transformation and obsessed with economic despair and political dejection. Although the developing countries as represented by China acknowledge the positive role played by the post-war international order in safeguarding peace, boosting prosperity and promoting globalization, they criticize the existing order for lack of inclusiveness in politics and equality in economy, as well as double standard in security, believing it has failed to reflect the multi-polarization trend of the world and is an exclusive “circle club”. Therefore, there is much room for improvement. For China, to lead the transformation of the global governance system and international order not only supports the efforts of the developing countries to uphold multilateralism rather than unilateralism, advocate the rule of law rather than the law of the jungle and practice democracy rather than power politics in international relations, but also is an important subject concerning whether China could gain the discourse power and development space corresponding to its own strength and interests in the process of innovating and perfecting the framework of international order. C. To Promote Integration of the Eastern and Western Civilizations. Dialog among civilizations, which is the popular foundation for any country’s diplomatic proposals, runs like a trickle moistening things silently. Nevertheless, in the existing international system guided by the “Western-Centrism”, the Western civilization has always had the self-righteous superiority, conflicting with the interests and mentality of other countries and having failed to find the path to co-existing peacefully and harmoniously with other civilizations. So to speak, many problems of today, including the growing gap in economic development between the developed and developing countries against the background of globalization, the Middle East trapped in chaos and disorder, the failure of Russia and Turkey to “integrate into the West”, etc., can be directly attributed to lack of exchanges, communication and integration among civilizations. Since the 18th National Congress of CPC, Xi Jinping has raised the concept of “Chinese Dream” that reflects both Chinese values and China’s pursuit, re-introducing to the world the idea of “all living creatures grow together without harming one another and ways run parallel without interfering with one another”, which is the highest ideal in Chinese traditional culture, and striving to shape China into a force that counter-balance the Western civilization. He has also made solemn commitment that “we respect the diversity of civilizations …… cannot be puffed up with pride and depreciate other civilizations and nations”; “facing the people deeply trapped in misery and wars, we should have not only compassion and sympathy, but also responsibility and action …… do whatever we can to extend assistance to those people caught in predicament”, etc. China will rebalance the international pattern from a more inclusive civilization perspective and with more far-sighted strategic mindset, or at least correct the bisected or predominated world order so as to promote the parallel development of the Eastern and Western civilizations through mutual learning, integration and encouragement. D. To Pass on China’s Confidence. Only a short while ago, some Western countries had called for “China’s responsibility” and made it an inhibition to “regulate” China’s development orientation. Today, China has become a source of stability in an international situation full of uncertainties. Over the past 5 years, China has made outstanding contributions to the recovery of world economy under relatively great pressure of its own economic downturn. Encouraged by the “four confidences”, the whole of the Chinese society has burst out innovation vitality and produced innovation achievements, making people have more sense of gain and more optimistic about the national development prospect. It is the heroism of the ordinary Chinese to overcome difficulties and realize the ideal destiny that best explains China’s confidence. When this confidence is passed on in the field of diplomacy, it is expressed as: first, China’s posture is seen as more forging ahead and courageous to undertake responsibilities ---- proactively shaping the international agendas rather than passively accepting them; having clear-cut attitudes on international disputes rather than being equivocal; and extending international cooperation to comprehensive and dimensional development rather than based on the theory of “economy only”. In sum, China will actively seek understanding and support from other countries rather than imposing its will on others with clear-cut Chinese characteristics, Chinese style and Chinese manner. Second, China’s discourse is featured as a combination of inflexibility and yielding as well as magnanimous ---- combining the internationally recognized diplomatic principles with the excellent Chinese cultural traditions through digesting the Chinese and foreign humanistic classics assisted with philosophical speculations to make “China Brand, Chinese Voice and China’s Image get more and more recognized”. Third, the Chinese solution is more practical and intimate to people as well as emphasizes inclusive cooperation, as China is full of confidence to break the monopoly of the Western model on global development, “offering mankind a Chinese solution to explore a better social system”, and “providing a brand new option for the nations and peoples who are hoping both to speed up development and maintain independence”. II.Path Searching of the “Chinese Solution” for Global Governance Over the past years’ efforts, China has the ability to transform itself from “grasping the opportunity” for development to “creating opportunity” and “sharing opportunity” for common development, hoping to pass on the longing of the Chinese people for a better life to the people of other countries and promoting the development of the global governance system toward a more just and rational end. It has become the major power’s conscious commitment of China to lead the transformation of the global governance system in a profound way. A. To Construct the Theoretical System for Global Governance. The theoretical system of global governance has been the focus of the party central committee’s diplomatic theory innovation since the 18th National Congress of CPC as well as an important component of the theory of socialism with Chinese characteristics for a new era, which is not only the sublimation of China’s interaction with the world from “absorbing and learning” to “cooperation and mutual learning”, but also the cause why so many developing countries have turned from “learning from the West” to “exploring for treasures in the East”. In the past 5 years, the party central committee, based on precise interpretation of the world pattern today and serious reflection on the future development of mankind, has made a sincere call to the world for promoting the development of global governance system toward a more just and rational end, and proposed a series of new concepts and new strategies including engaging in major power diplomacy with Chinese characteristics, creating the human community with common destiny, promoting the construction of new international relationship rooted in the principle of cooperation and win-win, enriching the strategic thinking of peaceful development, sticking to the correct benefit view, formulating the partnership network the world over, advancing the global economic governance in a way of mutual consultation, joint construction and co-sharing, advocating the joint, comprehensive, cooperative and sustainable security concept, and launching the grand “Belt and Road” initiative. The Chinese solution composed of these contents, not only fundamentally different from the old roads of industrial revolution and colonial expansion in history, but also different from the market-driven neo-liberalism model currently advocated by Western countries and international organizations, stands at the height of the world and even mankind, seeking for global common development and having widened the road for the developing countries to modernization, which is widely welcomed by the international community. B. To Supplement and Perfect the Global Governance System. Currently, the international political practice in global governance is mostly problem-driven without creating a set of relatively independent, centralized and integral power structures, resulting in the existing global governance systemcharacterized as both extensive and unbalanced. China has been engaged in reform and innovation, while maintaining and constructing the existing systems, producing some thinking and method with Chinese characteristics. First, China sees the UN as a mirror that reflects the status quo of global governance, which should act as the leader of global governance, and actively safeguards the global governance system with the UN at the core. Second, China is actively promoting the transforming process of such recently emerged international mechanisms as G20, BRICS and SCO, perfecting them through practice, and boosting Asia-Pacific regional cooperation and the development of economic globalization. China is also promoting the construction of regional security mechanism through the Six-Party Talks on Korean Peninsula nuclear issue, Boao Forum for Asia, CICA and multilateral security dialog mechanisms led by ASEAN so as to lay the foundation for the future regional security framework. Third, China has initiated the establishment of AIIB and the New Development Bank of BRICS, creating a precedent for developing countries to set up multilateral financial institutions. The core of the new relationship between China and them lies in “boosting rather than controlling” and “public rather than private”, which is much different from the management and operation model of the World Bank, manifesting the increasing global governance ability of China and the developing countries as well as exerting pressure on the international economic and financial institution to speed up reforms. Thus, in leading the transformation of the global governance system, China has not overthrown the existing systems and started all over again, but been engaged in innovating and perfecting; China has proactively undertaken international responsibilities, but has to do everything in its power and act according to its ability. C. To Reform the Global Governance Rules. Many of the problems facing global governance today are deeply rooted in such a cause that the dominant power of the existing governance system has taken it as the tool to realize its own national interests first and a platform to pursue its political goals. Since the beginning of this year, the US has for several times requested the World Bank, IMF and G20 to make efforts to mitigate the so-called global imbalance, abandoned its commitment to support trade openness, cut down investment projects to the middle-income countries, and deleted commitment to support the efforts to deal with climate change financially, which has made the international systems accessories of the US domestic economic agendas, dealing a heavy blow to the global governance system. On the contrary, the interests and agendas of China, as a major power of the world, are open to the whole world, and China in the future “will provide the world with broader market, more sufficient capital, more abundant goods and more precious opportunities for cooperation”, while having the ability to make the world listen to its voice more attentively. With regard to the subject of global governance, China has advocated that what global governance system is better cannot be decided upon by any single country, as the destiny of the world should be in the hands of the people of all countries. In principle, all the parties should stick to the principle of mutual consultation, joint construction and co-sharing, resolve disputes through dialog and differences through consultation. Regarding the critical areas, opening to the outer world does not mean building one’s own backyard, but building the spring garden for co-sharing; the “Belt and Road” initiative is not China’s solo, but a chorus participated in by all countries concerned. China has also proposed international public security views on nuclear security, maritime cooperation and cyber space order, calling for efforts to make the global village into a “grand stage for seeking common development” rather than a “wrestling arena”; we cannot “set up a stage here, while pulling away a prop there”, but “complement each other to put on a grand show”. From the orientation of reforms, efforts should be made to better safeguard and expand the legitimate interests of the developing countries and increase the influence of the emerging economies on global governance. Over the past 5 years, China has attached importance to full court diplomacy, gradually coming to the center stage of international politics and proactively establishing principles for global governance. By hosting such important events as IAELM, CICA Summit, G20 Summit, the Belt and Road International Cooperation Forum and BRICS Summit, China has used theseplatforms to elaborate the Asia-Pacific Dream for the first time to the world, expressing China’s views on Asian security and global economic governance, discussing with the countries concerned with the Belt and Road about the synergy of their future development strategies and setting off the “BRICS plus” capacity expansion mechanism, in which China not only contributes its solution and shows its style, but also participates in the shaping of international principles through practice. On promoting the resolution of hot international issues, China abides by the norms governing international relations based on the purposes and principles of the UN Charter, and insists on justice, playing a constructive role as a responsible major power in actively promoting the political accommodation in Afghanistan, mediating the Djibouti-Eritrea dispute, promoting peace talks in the Middle East, devoting itself to the peaceful resolution of the South China Sea dispute through negotiations. In addition, China’s responsibility and quick response to international crises have gained widespread praises, as seen in such cases as assisting Africa in its fight against the Ebola epidemic, sending emergency fresh water to the capital of Maldives and buying rice from Cambodia to help relieve its financial squeeze, which has shown the simple feelings of the Chinese people to share the same breath and fate with the people of other countries. D. To Support the Increase of the Developing Countries’ Voice. The developing countries, especially the emerging powers, are not only the important participants of the globalization process, but also the important direction to which the international power system is transferring. With the accelerating shift of global economic center to emerging markets and developing economies, the will and ability of the developing countries to participate in global governance have been correspondingly strengthened. As the biggest developing country and fast growing major power, China has the same appeal and proposal for governance as other developing countries and already began policy coordination with them, as China should comply with historical tide and continue to support the increase of the developing countries’ voice in the global governance system. To this end, China has pursued the policy of “dialog but not confrontation, partnership but not alliance”, attaching importance to the construction of new type of major power relationship and global partnership network, while making a series proposals in the practice of global governance that could represent the legitimate interests of the developing countries and be conducive to safeguarding global justice, including supporting an open, inclusive, universal, balanced and win-win economic globalization; promoting the reforms on share and voting mechanism of IMF to increase the voting rights and representation of the emerging market economies; financing the infrastructure construction and industrial upgrading of other developing countries through various bilateral or regional funds; and helping other developing countries to respond to such challenges as famine, refugees, climate change and public hygiene by debt forgiveness and assistance.

#### Extinction

Robert Bailey 18, Vision of Earth contributor and computer science masters, 9-5-2018, "Why do we need global governance?," Vision of Earth, https://www.visionofearth.org/social-change/global-governance/

Global governance is necessary because humanity increasingly faces both problems and opportunities that are global in scale. Today, transnational problems such as violence and pandemics routinely reach across borders, affecting us all. At the same time, the increasingly integrated global system has also laid the necessary foundations for peace and spectacular prosperity. Effective global governance will allow us to end armed conflict, deal with new and emerging problems such as technological risks and automation, and to achieve levels of prosperity and progress never before seen.1 The most important challenge for humanity to overcome is that of existential risks. One way to look at the danger of an existential risk is to quantify the level of global coordination needed to deal with it. While best-shot risks, at one end of the spectrum only require that a single nation, organization or even individual (i.e., superhero) has the means and the will to save everyone, weakest-link risks, at the other end of the spectrum, are dangers that might require literally every country to take appropriate action to prevent catastrophe, with no room for failure.2 3 We’ve always been at risk of natural disaster, but with advances in our level of technology the risk we pose to ourselves as a species becomes ever greater. Nuclear weapons are a well-known risk that we still live with to this day. The progress of technological research exposes us to new dangers such as bioengineered superbugs, nanotechnological menaces, and the risk of an out-of-control artificial intelligence with ill-intent. Increased levels of global coordination are needed to combat many of these risks, as described in our article on the cooperation possibilities frontier. There are other problems that don’t necessarily threaten the species or even civilization as we know it, but which are holding back the development of prosperity and progress. Armed conflict, around since the dawn of history, still haunts us today. Even though wars between great powers appear to be a thing of the past, regional conflicts still account for tremendous human suffering and loss of life in parts of the world without stable governance.4 Other problems have emerged precisely because of our successes in the past. The unprecedented advancement of human wellbeing and prosperity over the past century has been based in large part on the use of fossil fuels, thus exposing us to climate change. Widespread automation, already a stressor on society, will put increased pressure on the social and economic fabric of our societies over the next few decades. Global governance can help alleviate these issues in various ways – we refer the interested reader to the very detailed work in Ruling Ourselves. Finally, global governance will increasingly be judged not only by the extent to which it prevents harm, but also by its demonstrated ability to improve human wellbeing.5 Progress has let us set our sights higher as a species, both for what we consider to be the right trajectory for humanity and for our own conduct.6 Major advances in human wellbeing can be accomplished with existing technology and modest improvements in global coordination. Effective global governance is global governance that tackles these issues better than the regional governments of the world can independently. Global governance is key to solving global problems. Without it, we may not be able to avoid weakest-link existential risks or regulate new and dangerous technologies. With it, we may be able to prosper as we never have before. The next step is to determine how effective global governance can be achieved.

# Case

## Framing

#### AT Butler

#### 1. Life is a prerequisite – even if there is some inequality in the world, that is better than if everyone dies due to disease or a nuclear war – extinction forecloses any future value or rectification of social ills

#### 2. DA’s turn and outweigh case – our impacts will hit those in the Global South the hardest for the same reasons current medical inequalities do – our impacts happen on a much larger scale and ensure that everyone gets hit by disease and war rather than just a few

#### AT Santos

#### 1. Assumes no CP – since we also solve the case this isn’t unique

#### 2. Not sacrificial logic – the disad proves that they hurt minorities just as much as they hurt the majority. Protecting a minority at the expense of the lives of the majority is ethically irresponsible, but attempting to protect a minority at the expense of the lives of both the majority and the minority is the essence of moral callousness

**1. Magnitude first- epistemic perfection is impossible because the nature of risk-calculus is imperfect, but still necessary because we can’t afford to be wrong once**

-precautionary principle= default

**Jablonowski 10**

**(Mark, April, Lecturer in Economics at the University of Hartford, “Implications of Fuzziness for the Practical Management of High-Stakes Risks,” International Journal of Computational Intelligence Systems, Vol.3, No. 1, JKS)**

**“Danger” is an inherently fuzzy concept. Considerable knowledge imperfections surround** both **the probability of high-stakes exposures, and the assessment of their acceptability.** **This is due to the complex and dynamic nature of risk in the modern world**. ¶ **Fuzzy thresholds for danger are most effectively established based on natural risk standards. This means that risk levels are acceptable only to the degree they blend with natural background levels**. This concept reflects an evolutionary process that has supported life on this planet for thousands of years. By adhering to these levels, **we can help assure ourselves of thousands more.** While the level of such risks is yet to be determined, **observation suggest that the degree of human-made risk we routinely subject ourselves to is several orders of magnitude higher.** ¶ Due to the fuzzy nature of risk, we can not rely on statistical techniques. **The fundamental problem with catastrophe remains, in the long run, there may be no long run**. That is, **we can not rely on results “averaging out” over time.** With such risks, **only precautionary avoidance** (based on the minimax’ing of the largest possible loss) **makes sense. Combined with reasonable natural thresholds, this view allows a very workable approach to achieving safe progress**.

**2. Focusing only on probability is terrible decision-making**

**Clarke 08**

**[Lee, member of a National Academy of Science committee that considered decision-making models, Anschutz Distinguished Scholar at Princeton University, Fellow of AAAS, Professor Sociology (Rutgers), Ph.D. (SUNY), “Possibilistic Thinking: A New Conceptual Tool for Thinking about Extreme Events,” Fall, Social Research 75.3, JSTOR]**

In scholarly work, the subfield of disasters is often seen as narrow. One reason for this is that a lot of scholarship on disasters is practically oriented, for obvious reasons, and the social sciences have a deep-seated suspicion of practical work. This is especially true in sociology. Tierney (2007b) has treated this topic at length, so there is no reason to repeat the point here. There is another, somewhat unappreciated reason that **work on disaster is seen as narrow**, a reason that holds some irony **for** the main thrust of my argument here: **disasters are unusual and** the **social sciences are** generally **biased toward phenomena that are frequent. Methods textbooks caution against** using case stud- ies as representative of anything, and **articles** in mainstreams journals that are **not based on** **probability samples** must issue similar obligatory caveats. **The premise, itself narrow, is that the only way to be certain** that we know something about the social world, and the only way to control for subjective influences in data acquisition, **is to follow** the tenets of **probabilistic sampling**. This view is a correlate of the central way of defining rational action and rational policy in academic work of all varieties and also in much practical work, which is to say in terms of probabilities. **The irony is that probabilistic thinking has its own biases, which, if unacknowledged and uncorrected** for, **lead to a conceptual neglect of extreme events**. This leaves us, as scholars, paying attention to disasters only when they happen and doing that makes the accumulation of good ideas about disaster vulnerable to issue-attention cycles (Birkland, 2007). **These conceptual blinders lead to a neglect of disasters** **as "strategic research sites**" (Merton, 1987), **which results in learning less about disaster than we could** and in missing opportunities to use disaster to learn about society (cf. Sorokin, 1942). **We need new conceptual tools** **because of an upward trend in frequency and severity of disaster** since 1970 (Perrow, 2007), and because of a growing intellectual attention to the idea of worst cases (Clarke, 2006b; Clarke, in press). For instance, the chief scientist in charge of studying earthquakes for the US Geological Service, Lucile Jones, has worked on the combination of events that could happen in California that would constitute a "give up scenario": a very long-shaking earthquake in southern California just when the Santa Anna winds are making everything dry and likely to burn. In such conditions, meaningful response to the fires would be impossible and recovery would take an extraordinarily long time. There are other similar pockets of scholarly interest in extreme events, some spurred by September 11 and many catalyzed by Katrina. The **consequences** of disasters **are also becoming more severe**, both in terms of lives lost and property damaged. **People** and their places **are becoming more vulnerable. The most important reason** that vulnerabilities are increasing **is population concentration** (Clarke, 2006b). This is a general phenomenon and includes, for example, flying in jumbo jets, working in tall buildings, and attending events in large capacity sports arenas. **Considering** disasters whose origin is **a natural hazard, the** specific **cause** of increased vulnerability **is** that **people** are **moving** **to where hazards originate**, and most especially to where the water is. In some places, this makes them vulnerable to hurricanes that can create devastating storm surges; in others it makes them vulnerable to earthquakes that can create tsunamis. **In any case, the general problem is that people concentrate themselves in dangerous places, so when the hazard comes disasters are intensified.** More than one-half of Florida's population lives within 20 miles of the sea. Additionally, Florida's population grows every year, along with increasing development along the coasts. The risk of exposure to a devastating hurricane is obviously high in Florida. No one should be surprised if during the next hurricane season Florida becomes the scene of great tragedy. The **demographic pressures and attendant development are wide- spread. People are concentrating along** the **coasts** of the United States, **and**, like Florida, **this puts people at risk** of water-related hazards. Or consider the Pacific Rim, the coastline down the west coasts of North and South America, south to Oceania, and then up the eastern coast- line of Asia. There the hazards are particularly threatening. Maps of population concentration around the Pacific Rim should be seen as target maps, because along those shorelines are some of the most active tectonic plates in the world. The 2004 Indonesian earthquake and tsunami, which killed at least 250,000 people, demonstrated the kind of damage that issues from the movement of tectonic plates. (Few in the United States recognize that there is a subduction zone just off the coast of Oregon and Washington that is quite similar to the one in Indonesia.) Additionally, volcanoes reside atop the meeting of tectonic plates; the typhoons that originate in the Pacific Ocean generate furiously fatal winds. **Perrow** (2007) **has generalized** the point about **concentration, arguing** not only that **we increase vulnerabilities by increasing the breadth and depth of exposure to hazards but also by concentrating industrial facilities with catastrophic potentia**l. Some of Perrow's most important **examples concern chemical production** facilities. These are facilities that bring together in a single place multiple stages of production used in the production of toxic substances. Key to Perrow's argument is that there is no technically necessary reason for such concentration, although there may be good economic reasons for it. **The general point is that we can expect more disasters,** whether their origins are **"natural" or "technological."** We can also expect **more death and destruction** from them. **I predict we will continue to be poorly prepared to deal with disaster**. **People** around the world **were appalled with the incompetence of** America's **leaders** and orga**-** nizations **in** the wake of Hurricanes **Katrina** and Rita. Day after day we watched people suffering unnecessarily. Leaders were slow to grasp the importance of the event. With a few notable exceptions, organi- zations lumbered to a late rescue. Setting aside our moral reaction to the official neglect, perhaps **we ought to ask why we should have expected a competent response at all**? Are US leaders and organiza- tions particularly attuned to the suffering of people in disasters? Is the political economy of the United States organized so that people, espe- cially poor people, are attended to quickly and effectively in noncri- sis situations? The answers to these questions are obvious. If social systems are not arranged to ensure people's well-being in normal times, there is no good reason to expect them to be so inclined in disastrous times. Still, **if we are ever going to be reasonably well prepared to avoid or respond to the next Katrina-like event, we need to identify the barriers to effective thinking about,** and effective response to, **disasters**. **One of those barriers is that we do not have a set of concepts that would help us think rigorously about out-sized events. The chief toolkit of concepts that we have** for thinking about important social events **comes from probability theory**. There are good reasons for this, as probability theory has obviously served social research well. Still, **the toolkit is incomplete** when it comes to extreme events, **especially when it is used as a base whence to make normative judgments about what** people, organizations, and **governments should** and should not **do**. **As a complement** to probabilistic thinking I propose that **we need possibilistic thinking**. In this paper I explicate the notion of possibilistic thinking. I first discuss the equation of probabilism with rationality in scholarly thought, followed by a section that shows the ubiquity of possibilis- tic thinking in everyday life. Demonstrating the latter will provide an opportunity to explore the limits of the probabilistic approach: that **possibilistic thinking** is widespread suggests it **could be used more rigorously** in social research. I will then address the most vexing prob- lem with advancing and employing possibilistic thinking: the prob- lem of infinite imagination. I argue that **possibilism can be used with discipline, and** that **we can be smarter about responding** to disasters **by doing so**.

**Rejecting strategic predictions of threats makes them inevitable—decisionmakers will rely on preconceived conceptions of threat rather than the more qualified predictions of analysts**

Michael **Fitzsimmons 7**, Washington DC defense analyst, “The Problem of Uncertainty in Strategic Planning”, Survival, Winter 06-07, online)

But handling even this weaker form of uncertainty is still quite challeng- ing. **If not sufficiently bounded, a high degree of variability in planning factors can exact a significant price on planning. The complexity presented by great variability strains the cognitive abilities of even the most sophisticated decision- makers**.15 And even a robust decision-making process sensitive to cognitive limitations necessarily sacrifices depth of analysis for breadth as variability and complexity grows. It should follow, then, that **in planning under conditions of risk, variability in strategic calculation should be carefully tailored to available analytic and decision processes. Why is this important? What harm can an imbalance between complexity and cognitive or analytic capacity in strategic planning bring? Stated simply, where analysis is silent or inadequate, the personal beliefs of decision-makers fill the void. As political scientist Richard Betts found in a study of strategic sur- prise, in ‘an environment that lacks clarity, abounds with conflicting data, and allows no time for rigorous assessment of sources and validity, ambiguity allows intuition or wishfulness to drive interpretation ... The greater the ambiguity, the greater the impact of preconceptions.**’16 The decision-making environment that Betts describes here is one of political-military crisis, not long-term strategic planning. But **a strategist who sees uncertainty as the central fact of his environ- ment brings upon himself some of the pathologies of crisis decision-making. He invites ambiguity, takes conflicting data for granted and substitutes a priori scepticism about the validity of prediction for time pressure as a rationale for discounting the importance of analytic rigour**. It is important not to exaggerate the extent to which data and ‘rigorous assessment’ can illuminate strategic choices. Ambiguity is a fact of life, and scepticism of analysis is necessary. Accordingly, the intuition and judgement of decision-makers will always be vital to strategy, and attempting to subordinate those factors to some formulaic, deterministic decision-making model would be both undesirable and unrealistic. All the same, there is danger in the opposite extreme as well. **Without careful analysis of what is relatively likely and what is relatively unlikely, what will be the possible bases for strategic choices? A decision-maker with no faith in prediction is left with little more than a set of worst-case scenarios and his existing beliefs about the world** to confront the choices before him. **Those beliefs may be more or less well founded, but if they are not made explicit and subject to analysis and debate regarding their application to particular strategic contexts, they remain only beliefs and premises, rather than rational judgements. Even at their best, such decisions are likely to be poorly understood by the organisations charged with their implementation.** At their worst, such decisions may be poorly understood by the decision-makers themselves.

## Adv

#### Vaccines are too hard to replicate – IP waiver does nothing

Ana Santos Rutschman 21, Assistant Professor of Law at Saint Louis University School of Law., “The COVID-19 Vaccine Patent Waiver: The Wrong Tool for the Right Goal,” Bill of Health, 5-5-2021, https://blog.petrieflom.law.harvard.edu/2021/05/05/covid-vaccine-patent-waiver/

Unlike vaccines, the drugs at stake then were much less difficult to replicate, and third parties availing themselves of a compulsory license faced no significant knowledge deficit. Moreover, there was sufficient production capacity and the necessary raw materials for these drugs to be produced and distributed. Compulsory licensing was thus the right tool for this particular public health problem. By contrast, a waiver of COVID-19 vaccine patents is the wrong legal and policy tool because it does not address the lack of knowledge sharing nor the shortage of raw materials and manufacturing capacity. Furthermore, the use of a waiver is politically fraught — as was the use of compulsory licenses in the context of HIV/AIDS. We submit that battles of the political economy are best fought when prevailing on the use of a legal tool that actually solves the underlying practical problems. For the reasons stated above, that is not the case with waivers. It can be appealing to see a patent waiver as an attractive short-term solution. Yet, even the short-term needs are too intense and the challenges too complex for waivers to fully address the infrastructural and knowledge gaps, as well as the additional problem of inequitable distribution of existing vaccines.

#### There is no spare capacity that would be unlocked by IP waivers

Hans Sauer 21, Deputy General Counsel and Vice President for Intellectual Property for the Biotechnology Innovation Organization, “Waiving IP Rights During Times of COVID: A ‘False Good Idea’,” IPWatchdog, 4-19-2021, https://www.ipwatchdog.com/2021/04/19/waiving-ip-rights-during-times-of-covid-a-false-good-idea/id=132399/

The Proposed Waiver is Unlikely to Help the Fight Against the Pandemic To begin with, one would think, the burden of establishing the need for such an extreme and disruptive measure should be on its proponents. Yet, in the face of unprecedented progress towards COVID vaccines, tests and treatments in record time, the waiver proponents can point to no credible instances in which IP has in fact hindered the development or production of COVID-19 countermeasures. Readers should judge for themselves by perusing the joint South African/Indian TRIPS Council submission purporting to demonstrate such IP barriers. Even cursory inspection shows that this proof consists of a number of pending patent applications, a handful of patents that haven’t been asserted, a few statements by politicians, and historical narratives having nothing to do with COVID-19. There have been a few instances of patent litigation, but none to block or delay COVID products. Interestingly, royalty-free licenses by drug originators to dozens of manufacturers in developing countries are counted as IP barriers to access. Perhaps recognizing the lack of affirmative proof supporting the need for a COVID IP waiver, proponents are increasingly trying to shift the burden to those who oppose the waiver, maybe best exemplified by World Health Organization Director General Tedros Ghebreyesus’ stance: “if not now, then when would a WTO waiver ever be justified?” Yet this is a poor substitute for an actual rationale, especially when the TRIPS Agreement and its addenda are already replete with IP flexibilities that have been justified for both national and multilateral use on the ground that they will be necessary in a public health emergency. The same proponents who have for decades with significant traction argued for an ever-growing expansion of these flexibilities now say that it is not worth even trying to use them; only the effective abrogation of all IP rights in relation to COVID-19 would be a quick enough measure to deal with the present crisis while it lasts. However, the proposed blanket suspension of IP rights is no quick fix for the pandemic, as it is unlikely to accelerate the delivery of COVID-19 vaccines. Waiver proponents have been unable to document the existence of idle global COVID vaccine manufacturing capacity that could be unleashed by suspending IP rights. Existing capacity to produce traditional vaccines with conventional manufacturing technology simply cannot quickly or easily be converted to produce the advanced COVID-19 vaccines currently deployed. Thus, developing country manufacturers that currently make e.g. diphtheria, yellow fever, or tetanus vaccines, cannot simply be re-tooled to make the high-end mRNA or vectored COVID vaccines we are eagerly waiting for. Very different facilities will be needed, and getting these built, certified, and operational will take time, money, and precious expertise. Waiver proponents also seem to forget that someone must keep making the whooping cough, polio, MMR, and other childhood vaccines against diseases that kill more children in the developing world than COVID ever will. Current global need for non-COVID vaccines is estimated at 3.5-5.5 billion doses per year, and those who talk about using existing capacity must realize that we cannot convert current manufacturing away from these critically-important products. On top of that, an estimated 14 billion doses of COVID vaccines will be needed globally. As GAVI – The Vaccine Alliance explains, it was always clear that demand for COVID vaccines would be high, immediate, and impossible to meet in the short term. This is no fault of the IP system. Vaccine manufacturing processes are complex, require specific know-how and equipment, and just cannot happen overnight. Some COVID-19 vaccines involve new technologies, such as mRNA and lipid nanoparticle encapsulation, for which no large-scale manufacturing facilities or copious raw materials existed at the outset of the pandemic. The worldwide capacity to build or convert new plants is likewise limited, specialized manufacturing equipment is difficult or impossible to source, and none of this is or was ever going to be achievable within a few months as the proponents of the TRIPS waiver assert. Not even counting the time it takes to construct and equip a new plant, just the regulatory certification of a completed new facility takes several months before it can begin commercial production, and the manufacture and quality control of a single batch of COVID-19 vaccine takes 3-4 months before it can be released. Anywhere between 100 and 1,000 quality controls are done at each step of the manufacturing process. Those who argue that an IP waiver would enable the free flow of COVID vaccines within months are raising impossible expectations.

#### Only a symbolic move

Damian Garde 21, National Biotech Reporter, “Waiver of patent rights on Covid vaccines may be mostly symbolic, for now,” STAT, 5-6-2021, https://www.statnews.com/2021/05/06/waiver-of-patent-rights-on-covid-19-vaccines-in-near-term-may-be-more-symbolic-than-substantive/

The U.S.’s stunning endorsement of a proposal to waive Covid-19 vaccine patents has won plaudits for President Biden and roiled the global pharmaceutical industry. But, at least in the short term, it’s likely to be more of a symbolic milestone than a turning point in the pandemic. For months, proponents of the proposal have argued that the need to waive intellectual property protections was urgent given the growth of Covid cases in low- and middle-income countries, which have been largely left without the huge shipments of vaccine already purchased by wealthy countries. But patents alone don’t magically produce vaccines. Experts suggested the earliest the world could expect to see additional capacity flowing from the waiver — if it’s approved at the World Trade Organization — would be in 2022. Prashant Yadav, a supply chain expert and senior fellow at the Center for Global Development, said the biggest barrier to increasing the global vaccine supply is a lack of raw materials and facilities that manufacture the billions of doses the world needs. Temporarily suspending some intellectual property, as the U.S. proposes to do, would have little effect on those problems, he said.

#### Disease can’t cause extinction

Dr. Toby Ord 20, Senior Research Fellow in Philosophy at Oxford University, DPhil in Philosophy from the University of Oxford, The Precipice: Existential Risk and the Future of Humanity, Hachette Books, Kindle Edition, p. 124-126

Are we safe now from events like this? Or are we more vulnerable? Could a pandemic threaten humanity’s future?10

The Black Death was not the only biological disaster to scar human history. It was not even the only great bubonic plague. In 541 CE the Plague of Justinian struck the Byzantine Empire. Over three years it took the lives of roughly 3 percent of the world’s people.11

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 exchange, through diseases such as measles, influenza and especially smallpox.

During the next hundred 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 percent of the population of the Americas during that century, though the number could also be much lower.12 And it is very difficult to tease out how much of this should be attributed to war and occupation, rather than disease. As a rough upper bound, the Columbian exchange may have killed as many as 10 percent of the world’s people.13

Centuries later, the world had become so interconnected that a truly global pandemic was possible. Near 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. At least a third of the world’s population were infected and 3 to 6 percent were killed.14 This death toll outstripped that of the First World War, and possibly both World Wars combined.

Yet even events like these fall short of being a threat to humanity’s longterm potential.15

[FOONOTE]

In addition to this historical evidence, there are some deeper biological observations and theories suggesting that pathogens are unlikely to lead to the extinction of their hosts. These include the empirical anti-correlation between infectiousness and lethality, the extreme rarity of diseases that kill more than 75% of those infected, the observed tendency of pandemics to become less virulent as they progress and the theory of optimal virulence. However, there is no watertight case against pathogens leading to the extinction of their hosts.

[END FOOTNOTE]

In the great bubonic plagues we saw civilization in the affected areas falter, but recover. The regional 25 to 50 percent death rate was not enough to precipitate a continent-wide collapse of civilization. It changed the relative fortunes of empires, and may have altered the course of history substantially, but if anything, it gives us reason to believe that human civilization is likely to make it through future events with similar death rates, even if they were global in scale.

The 1918 flu pandemic was remarkable in having very little apparent effect on the world’s development despite its global reach. It looks like 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.16

It is less clear what lesson to draw from the Columbian exchange due to our lack of good records and its mix of causes. Pandemics were clearly a part of what led to a regional collapse of civilization, but we don’t know whether this would have occurred had it not been for the accompanying violence and imperial rule. The strongest case against existential risk from natural pandemics is the fossil record argument from Chapter 3. Extinction risk from natural causes above 0.1 percent per century is incompatible with the evidence of how long humanity and similar species have lasted. But this argument only works where the risk to humanity now is similar or lower than the longterm levels. For most risks this is clearly true, but not for pandemics. We have done many things to exacerbate the risk: some that could make pandemics more likely to occur, and some that could increase their damage. Thus even “natural” pandemics should be seen as a partly anthropogenic risk.

#### COVAX provides an alternative method of vaccine distribution

Berkley, 9/3/20 - 3 September, xx-xx-xxxx, "COVAX explained," No Publication, <https://www.gavi.org/vaccineswork/covax-explained/> Seth Franklin Berkley is an American medical epidemiologist, the CEO of the GAVI Alliance and a global advocate of the power of vaccines. He is the founder and former president and CEO of the International AIDS Vaccine Initiative. “Since 2011, I have been proudly serving Gavi as its CEO. During this time my focus has been to use my experience, as an epidemiologist and expert in vaccine development, to lead Gavi in its mission to improve access to new and underused vaccines and improve coverage and equity in poor countries. Under my leadership, in 2015 Gavi successfully raised US$ 7.5 billion in commitments during its last replenishment and has helped to reduce vaccine prices and assure a healthy vaccine market. This supported Gavi’s largest expansion, immunising an additional 300 million of the world’s poorest children and preventing 5-6 million deaths.” – Dr. Berkley via GAVI website*. (Harker AMo)*

At an early tage during this pandemic, it quickly became apparent that to end this global crisis we don’t just need COVID-19 vaccines, we also need to ensure that everyone in the world has access to them. This triggered global leaders to call for a solution that would accelerate the development and manufacture of COVID-19 vaccines, as well as diagnostics and treatments, and guarantee rapid, fair and equitable access to them for people in all countries. Today we have that solution – COVAX. The result of an extraordinary and unique global collaboration, with more than two-thirds of the world engaged – COVAX has the world’s largest and most diverse portfolio of COVID-19 vaccines, and as such represents the world’s best hope of bringing the acute phase of this pandemic to a swift end. WHAT IS COVAX? COVAX is one of three pillars of the Access to COVID-19 Tools (ACT) Accelerator, which was launched in April in response to this pandemic. Bringing together governments, global health organisations, manufacturers, scientists, private sector, civil society and philanthropy, with the aim of providing innovative and equitable access to COVID-19 diagnostics, treatments and vaccines. The COVAX pillar is focussed on the latter. It is the only truly global solution to this pandemic because it is the only effort to ensure that people in all corners of the world will get access to COVID-19 vaccines once they are available, regardless of their wealth. GO TO OUR COVAX PAGE Coordinated by Gavi, the Vaccine Alliance, the Coalition for Epidemic Preparedness Innovations (CEPI) and the WHO, COVAX will achieve this by acting as a platform that will support the research, development and manufacturing of a wide range of COVID-19 vaccine candidates, and negotiate their pricing. All participating countries, regardless of income levels, will have equal access to these vaccines once they are developed. The initial aim is to have 2 billion doses available by the end of 2021, which should be enough to protect high risk and vulnerable people, as well as frontline healthcare workers. For lower-income funded nations, who would otherwise be unable to afford these vaccines, as well as a number of higher-income self-financing countries that have no bilateral deals with manufacturers, COVAX is quite literally a lifeline and the only viable way in which their citizens will get access to COVID-19 vaccines. For the wealthiest self-financing countries, some of which may also be negotiating bilateral deals with vaccine manufacturers, it serves as an invaluable insurance policy to protect their citizens, both directly and indirectly. On the one hand it will provide direct protection by increasing their chances of securing vaccine doses. Yet, at the same time by procuring COVID-19 vaccines through COVAX, these nations will also indirectly protect their citizens by reducing the chances of resurgence by ensuring that the rest of the world gets access to doses too. WHY WE NEED COVAX COVAX is necessary because without it there is a very real risk that the majority of people in the world will go unprotected against SARS-CoV-2, and this would allow the virus and its impact to continue unabated. COVAX has been created to maximise our chances of successfully developing COVID-19 vaccines and manufacture them in the quantities needed to end this crisis, and in doing so ensure that ability to pay does not become a barrier to accessing them. To do this, first we need COVID-19 vaccines that are both safe and effective, which is by no means a certainty. There are currently more than 170 candidate vaccines in development, but the vast majority of these efforts are likely to fail. Based on previous vaccine development, those at the preclinical trial stage have roughly a 7% chance of succeeding, while the ones that make it to clinical trials have about a 20% chance. To increase the chances of success, COVAX has created the world’s largest and most diverse portfolio of these vaccines, with nine candidate vaccines already in development and a further nine under evaluation. COVAX has been created to maximise our chances of successfully developing COVID-19 vaccines and manufacture them in the quantities needed to end this crisis. By joining COVAX, both self-financing countries and funded countries will gain access to this portfolio of vaccines, as and when they prove to be both safe and effective. Self-financing countries will be guaranteed sufficient doses to protect a certain proportion of their population, depending upon how much they buy into it. Subject to funding availability, funded countries will receive enough doses to vaccinate up to 20 per cent of their population in the longer term. Since demand is initially likely to exceed supply once vaccines do become available, allocation will be spread across countries based on the number of doses that are available and increase as that availability increases. To make all this a reality, Gavi has created the COVAX Facility through which self-financing economies and funded economies can participate. Within this also sits an entirely separate funding mechanism, the Gavi COVAX Advance Market Commitment (AMC), which will support access to COVID-19 vaccines for lower-income economies. Combined, these make possible the participation of all countries, regardless of ability to pay. Read more: COVAX / COVID-19 / Vaccine support / About Gavi WHAT IS THE COVAX FACILITY? The principal role of the COVAX Facility is to maximise the chances of people in participating countries getting access to COVID-19 vaccines as quickly, fairly and safely as possible. By joining the Facility, participating countries and economies will not only get access to the world’s largest and most diverse portfolio of COVID-19 vaccines, but also an actively managed portfolio. The Facility continually monitors the COVID-19 vaccine landscape to identify the most suitable vaccine candidates, based on scientific merit and scalability, and works with manufacturers to incentivise them to expand their production capacity in advance of vaccines receiving regulatory approval. Normally, manufacturers are reluctant to risk making the significant investments needed to build or scale-up vaccine manufacturing facilities until they have received approval for a vaccine. But in the context of the current pandemic, which is costing the global economy US$ 375 billion every month, this would inevitably lead to significant delay and initially vaccine shortages once vaccines are licensed. To avoid this, the Facility is working with manufacturers to provide investments and incentives to ensure that manufacturers are ready to produce the doses we need as soon as a vaccine is approved. The Facility will also use the collective purchasing power that comes from having so many countries participate in order to negotiate highly competitive prices from manufacturers that are then passed on to participants. The Facility continually monitors the COVID-19 vaccine landscape to identify the most suitable vaccine candidates, based on scientific merit and scalability. Self-financing countries and economies participating in the Facility can request vaccine doses sufficient to vaccinate between 10-50% of their populations. The amount they pay into the Facility will reflect the number of doses they have requested. For these countries the Facility serves as a critical insurance policy that will significantly increase their chances of securing vaccines, even if their own bilateral deals fail. And by pooling resources through the Facility, participating countries and economies are essentially helping to increase the world’s chances of bringing about COVID-19 vaccines as quickly as possible, and in the quantities that we need. While there are no guarantees that any COVID-19 vaccine candidates will ultimately succeed, taking this global approach and sharing the risks through the Facility offers our best shot at beating this virus by enabling the world to share the rewards. At the time of writing this, 78 higher-income countries and economies have now confirmed their interest in participating the COVAX Facility, with more possibly to follow. This shows that the COVAX Facility is open for business and attracting the type of interest across the world that we had hoped for. Countries now have until 18 September to commit to legally binding agreements to participate and make their upfront payments into the Facility by 9 October. COMMITTED VS OPTIONAL PURCHASE Self-financing countries joining the COVAX Facility have two ways in which they can participate, through a Committed Purchase Arrangement or an Optional Purchase Arrangement. As the name implies, self-financing countries opting for a Committed Purchase will need to make committed guarantees to procure an agreed volume of doses through the Facility. In exchange for this firm commitment these participants will be required to provide a lower upfront payment of US$ 1.60 per dose, or 15% of the total cost per dose. Under this type of agreement, participants are effectively committing to purchase a set number of vaccines that, once available, will be fairly and equitably allocated amongst participants. Countries will have the ability to opt out of purchasing a vaccine should the price of the vaccine be twice (or more) that which was expected. For the Optional Purchase Arrangement, participants can choose to opt out of receiving any vaccine, without jeopardising their ability to receive their full share of doses of other candidates, subject to supply becoming available. This type of agreement may be more attractive to participants that already have bilateral agreements with manufacturers, through which they may already have secured sufficient doses of that particular vaccine. The trade-off for these participants, who will have greater choice, is that they will be required to pay a higher proportion of the total cost per dose up front, making a down payment of US$ 3.10 per dose and a risk-sharing guarantee of US$ 0.40 per dose to help protect the Facility against any liabilities resulting from participants deciding not to purchase a particular vaccine candidate after the Facility has already entered into a contract with the manufacturer. Also, by opting out of vaccines that have been allocated to them and waiting for another to become available, these countries may inevitably experience a delay in receiving their full committed volume of vaccines. In the end, the total cost for the vaccines will be the same for the two options. As a pass-through facility, participants will pay the amount for the doses that was negotiated by the facility, plus a speed premium invested in accelerating and scale-up of manufacturing, as well as a very small fee for the operation of the facility. Some manufacturers will be providing vaccines at flat prices where others will be tiering the prices based upon income levels. WHAT IS THE GAVI COVAX AMC? The primary focus of the Gavi COVAX AMC is to ensure that the 92 middle- and lower-income countries that cannot fully afford to pay for COVID-19 vaccines themselves get equal access to COVID-19 vaccines as higher-income self-financing countries and at the same time. Funding for the Gavi COVAX AMC is entirely separate from that of the COVAX Facility, which means that the AMC is in no way cross-subsidised by the funds of self-financing participants. Instead the AMC will be funded mainly through Official Development Assistance (ODA), as well as contributions from the private sector and philanthropy. So far, the AMC has raised about US$ 700 million of the initial seed capital target of US$ 2 billion that is needed by the end of 2020. So, in addition to deciding how they participate in the Facility, sovereign donors will need to decide to what extent they wish to contribute or allocate ODA towards this target and do so in a timely manner. Since no one is safe until everyone is safe, the Gavi COVAX AMC is the only way in which all countries will get equal and fair access to COVID-19 vaccines. HOW WILL VACCINE DOSES BE ALLOCATED? Once any of the COVAX portfolio vaccines have successfully undergone clinical trials and proved themselves to be both safe and effective, and have received regulatory approval, available doses will be allocated to all participating countries at the same rate, proportional to their total population size. A small buffer of about 5% of the total number of available doses will be kept aside to build a stockpile to help with acute outbreaks and to support humanitarian organisations, for example to vaccinate refugees who may not otherwise have access. Even though self-financing participants can request for enough doses to vaccinate between 10-50% of their population, no country will receive enough doses to vaccinate more than 20% of its population until all countries in the financing group have been offered this amount. The only exception is those countries who have opted to receive fewer than 20%. WHAT NOW? The fact that the global community has come so far so quickly and built such a comprehensive and effective global solution to this pandemic is a remarkable accomplishment. Now we need to implement it, and this hinges on countries buying into the COVAX Facility so that it can make urgent investments now. Having so many self-financing economies sign up to join the COVAX Facility is a tremendous step forward, and means we can now begin work signing formal agreements with vaccine manufacturers and developers to secure doses. This will not only allow COVAX to increase our chances of successfully developing COVID-19 vaccines, but also ensure that we have necessary productive capacity in place to manufacture the volumes of doses we need, the moment a vaccine is ready. In addition to this we need countries to urgently fill the funding gaps that still exist for research and development in COVID-19 vaccines. CEPI is leading the COVAX vaccines research and development work, with nine vaccine candidates already supported, eight of which are already in clinical trials. Governments have already committed US$ 1.4 billion towards this effort, but an additional US$ 1 billion is still needed to continue to move the portfolio forwards. It is also essential that the Gavi COVAX AMC meets its fundraising target of at least US$ 2 billion by the end of 2020, and also continues to discuss details with AMC-eligible economies what their participation will mean for them. This will be critical to ensuring that ability to pay does not become a barrier to accessing COVID-19 vaccines, a situation that would leave the majority of the world unprotected and which would allow this pandemic to continue far longer than necessary.