## 1NC – DA

#### WTO is near consensus on fisheries subsidies – success will require continued focus, flexibility, and cooperation among members

WTO 7/15 [(World Trade Organization) “WTO members edge closer to fisheries subsidies agreement,” News and Events, 7/15/2021] JL

During an all-day meeting with 104 ministers and heads of delegation, WTO members pledged to conclude the negotiations soon and certainly before the WTO's Ministerial Conference in early December, and to empower their Geneva-based delegations to do so. Members also confirmed that the negotiating text currently before them can be used as the basis for the talks to strike the final deal.

“I feel new hope this evening. Because ministers and heads of delegation today demonstrated a strong commitment to moving forward and doing the hard work needed to get these negotiations to the finish line. I applaud you for this. In 20 years of negotiations, this is the closest we have ever come towards reaching an outcome — a high-quality outcome that would contribute to building a sustainable blue economy,” said Director-General Ngozi Okonjo-Iweala.

“One fundamental conclusion that I draw from your interventions today is that members are ready to use the text as the basis for future negotiations. A second takeaway from today was that there is universal agreement about the importance of the food and livelihood security of artisanal fishers in developing and least developed countries. The prospect for a deal in the autumn ahead of our Ministerial Conference has clearly improved.”

The UN Food and Agriculture Organization estimates that one-third of global fish stocks are overfished and most of the rest is fully exploited. This is up from 10% in 1970 and 27% in 2000. Depleted stocks threaten the food security of low-income coastal communities, and the livelihoods of poor and vulnerable fishers who must go further and further from shore only to bring back smaller and smaller hauls.

Each year, governments hand out around $35 billion in fisheries subsidies, two-thirds of which go to commercial fishers. These subsidies keep at sea vessels which would otherwise be economically unviable. World leaders in 2015 made a fisheries subsidies agreement by 2020 part of the Sustainable Development Goals and trade ministers reaffirmed this pledge in 2017.

The negotiations on fisheries subsidies disciplines have been ongoing for nearly 20 years. Although there has been recent progress thanks to the intensive work that led to the development of the negotiating text on which members are working, the lack of political impetus in the talks to close the remaining gaps inspired Director-General Okonjo-Iweala to call this meeting of ministers.

Among the thorniest issues to resolve has been how to extend special and differential treatment to developing and least developed country WTO members while preserving the overall objective of enhanced sustainability of the oceans. Ministers said that the livelihoods and food security of poor and vulnerable artisanal fishers in developing and least developed countries were of great importance, as was preserving the sustainability objective of the negotiations.

Amb. Santiago Wills of Colombia, who chairs the Rules Negotiating Group overseeing the fisheries subsidies negotiations, said he had received some valuable inputs from the discussions. He now has greater clarity on the path forward and the next steps that would be required to harvest an agreement. He will be consulting with the Director-General and WTO members about charting the path forward for the next stage of the talks.

“I am very heartened by the responses and messages that we have heard today. What we sought from ministers today was political guidance to help close these negotiations soon. And we did hear that guidance. We have been given the ingredients to reach a successful conclusion; a commitment to finish well ahead of our Ministerial Conference a text that can be the platform for this final stage of the negotiations and fully empowered heads of delegations in Geneva. This represents a real success,” said Amb. Wills.

The Director-General said that delegations needed to prepare for an intensive period of line by line negotiations.

“As we enter this new phase of text-based discussions, the responsibility to conclude these negotiations is truly in the hands of members. To get from here to an agreement, it will be your job to find the necessary trade-offs and flexibilities. A successful outcome by MC12 is ultimately your responsibility,” she said. “The world is watching. The fisheries subsidies negotiations are a test both of the WTO's credibility as a multilateral negotiating forum and of the trading system's ability to respond to problems of the global commons.  If we wait another 20 years, there may be no marine fisheries left to subsidise — or artisanal fishing communities to support.”

#### IP disputes fragment WTO unity and trade off with subsidies negotiation

Patnaik 3/12 [(Priti, journalist in Geneva, Switzerland, master’s in Development Studies from The Graduate Institute in Geneva and a master’s in Business and Economic Reporting from New York University) “Could Vaccine Nationalism Spur Disputes At The WTO?” Geneva Health Files, 3/12/2021] JL

To protect domestic manufacturers and constituencies, countries may resort to filing disputes, if only to send a signal to other members, experts believe. To be sure, this is not only about vaccines. Going forward, export restrictions on raw materials can have implications for therapeutics as well. So the threat of a dispute may be a tool to deal with competition for scarce medical products during the pandemic, experts say.

Although trade restrictive measures are short-sighted and not a preferred policy option, governments see them as powerful instruments to meet political goals, to send a message to domestic stakeholders, sources said.

“My hunch is that all countries are sort of sitting on both sides of the fence. On the one hand, governments would like to maintain the discretion and the ability to impose export restrictions if they need to or if they think they need to. Whether that is medical products or personal protective equipment. On the other hand, everybody dislikes it when other countries impose export restrictions. So I think there is enough of an incentive for countries to sit down and negotiate,” one legal expert noted.

Sources also pointed to political declarations last year where WTO members came together and said that they would not impose restrictive trade measures. “In order to be constructive, countries decided that they were going to signal to members that will not introduce exports restrictive measures even though it may be expedient to do so,” one trade expert said. The way out, some feel, is to find solution to placing limits on export restrictions.

It is not just trade restrictive measures that could result in trade disputes. The heated political discussions on the TRIPS waiver at WTO is also aggravating the potential for disputes, according to experts involved in litigations in international trade in Geneva. Therefore these ostensibly independent processes, can catalyse disputes.

“The waiver discussion is very heated and it is aggravating the discussion on the EU's export restrictions. If the waiver succeeds, then the opposing members cannot do anything about it. So they will be looking at other ways to beat up on behavior they do not like on the COVID-19 front,” one trade law expert said.  Do not rule out disputes against supporters of the TRIPS waiver proposal, in case the waiver is adopted, the source added.

In their statement at the WTO General Council meeting last week, the EU said, “In order to ensure that vaccines and their ingredients are not directed to export destinations in unjustified volumes, the European Union had no choice but to introduce a transparency mechanism on Covid-19 vaccine export transactions.” The EU has said that the measures are WTO-consistent.

It added “Since the entry into force of the scheme on the 1 February, we have received 150 requests for export authorisation. All of them have been accepted. I repeat, all of them.” This week, the European Commission extended transparency and authorisation mechanism for exports of COVID-19 vaccines.

The EU is also a part of the Ottawa Group proposal on Trade and Health that also spells out commitments towards export restrictions. (See also *E.U. Exports Millions of Covid Vaccine Doses Despite Supply Crunch at Home*)

“Members bring disputes all the time, even when they know that it's going to take a long time to get a result and often they bring a dispute as leverage for negotiations. Filing a dispute does not mean they are looking for a solution. It does not mean the dispute will be litigated all the way to the end,” a trade lawyer said.

It could also result in a negotiated arrangement, like it was in 2001 in the U.S.-Brazil case. “Why did the U.S. bring a case against Brazil? It gave them leverage in negotiations, and to satisfy domestic stakeholders,” the lawyer added.

The impasse at the Appellate Body may not be a deterrent for countries to dissuade countries from bringing a dispute, some believe.

“The Appellate Body not being functional is not a problem. Countries have recourse to Article 25 under the Dispute Settlement Understanding (DSU) that provides for ‘expeditious arbitration as a alternate means to dispute settlement’,” a source involved in the WTO litigation process said. (The EU, for example, is a signatory to the Multi-party interim appeal arbitration arrangement, MPIA.)

While disputes may take up precious energy and resources of members already stretched in fighting to address the pandemic, it may likely be a strategy to address trade protectionism. Not all agree.

“I think the law is not really an answer here, I hate to say that because I'm a lawyer. But I really don't think the law is an answer because the law is so generically drafted right that and it's politically so sensitive. Which WTO panel will tell a member that restricting vaccines is not legitimate? It will ultimately harm the legitimacy of the trading system,” the person added.

#### Overfishing causes SCS war – WTO agreement solves

Cohen and Floyd 1/27 [(Sam, J.D. student at Harvard Law School, BA in history from Yale University, surface warfare officer in the U.S. Navy, and Steve, joint J.D./LL.M. in national security law at Georgetown University Law Center, lieutenant commander in U.S. Naval Intelligence) “Water Wars Special: How IUU Fishing Increases the Risk of Conflict, Lawfare, 1/27/2021] JL

The Food and Agriculture Organization of the United Nations has classified one-third of the world’s marine fisheries as overfished. The impact of unsustainable fishing is especially acute in the South China Sea, where coastal fisheries have lost 70 to 95 percent of their stocks since the mid-20th century and catch rates have declined by 70 percent throughout the past two decades. Furthermore, the sea’s coral reefs, which nurture critical feeding grounds for fish stocks, decline by 16 percent every 10 years. As traditional fishing grounds prove less fruitful, fishermen venture farther from shore and operate in contested areas. Indeed, when China faced dwindling coastal stocks in the 1990s, Beijing embarked on a massive shipbuilding effort; and President Xi Jinping continues to exhort Chinese fishermen to “build bigger ships and venture even farther into the oceans and catch bigger fish.” Such efforts incentivize IUU activity, heighten competition for increasingly scarce resources and feed an escalating cycle that accelerates stock depletion.

In the South China Sea, with its kaleidoscope of disputed claims, China’s excess capacity and IUU fishing practices exacerbate a particularly volatile environment. Depleted fishing stocks force fishermen to operate further from shore and increase the chance of violent encounters. Filipino authorities have intercepted Chinese boats illegally fishing off Palawan, and Philippine President Rodrigo Duterte claimed that Chinese fishermen intentionally rammed a Filipino fishing boat and left its crew stranded in the sea in 2019. Three years earlier, the Chinese Coast Guard rammed an Indonesian patrol boat attempting to interdict Chinese fishermen. As the Vietnamese government actively encourages fishermen to contest China’s expansive maritime claims, the Chinese Coast Guard expelled nearly 1,200 fishing boats from the northern half of the South China Sea last summer. During one such encounter, a Chinese Coast Guard vessel repeatedly rammed a Vietnamese fishing boat and sent its 17-person crew overboard. It’s true that fishing subsidies did not create the region’s historic animosities. But the activities these subsidies support add fuel to an already smoldering fire.

Dwindling stocks of fish, unsustainable practices and IUU fishing constitute a global crisis and increase the risk of maritime conflict. But this risk can be mitigated through international cooperation: A World Trade Organization (WTO) agreement on fishing subsidies would address a fundamental cause of these fishing-related problems and create a binding legal framework through which members could seek relief.

#### SCS conflict draws in the US and goes nuclear – extinction

Carter 20 (John Carter has been an economics and finance journalist for more than 40 years. Prior to joining the South China Morning Post, he worked for Market News International for more than 33 years, first as Washington Bureau Chief, then as European Managing Editor in Frankfurt, Germany and finally as Asian Managing Editor working out of Beijing, Global Impact newsletter: escalating conflict in the South China Sea, https://www.scmp.com/economy/article/3102323/global-impact-newsletter-escalating-conflict-south-china-sea)

If you want to start a world war, a good way to do it is to mix the escalating conflict between two of the world’s greatest military powers with the grievances of a half-dozen smaller countries over territorial claims. That’s the current situation in the South China Sea, the massive body of water that stretches more than 4,000km (2,485 miles) from mainland China in the north to Indonesia in the south – about the same distance between London and Chicago. China has claimed the vast majority of the South China Sea as its exclusive territory, including areas claimed by six other governments – Brunei, Indonesia, Malaysia, the Philippines, Taiwan, and Vietnam – that consider them part of their own exclusive economic zones. A map of the conflicting claims can be seen in this graphic presentation, while the history of China’s territorial disputes, including in the South China Sea, is explained in this video. China considers the South China Sea one of its “core” interests, of equal importance as Taiwan, Tibet and Xinjiang, meaning it is ready to go to war to defend it. It has marked the territory by a “nine dash line” on its maps, and even on its passports, angering its neighbours. China needs the oil and mineral wealth hidden beneath the South China Sea to supply its rapid economic recovery, as well as the fishing catch needed to feed the country’s 1.4 billion stomachs. An international tribunal ruled in 2016 that China did not have the right to claim the South China Sea as its sovereign territory, a ruling that China has pointedly rejected. To secure this vast sea area, China has turned uninhabited atolls and half-submerged rock formations into forward military bases, as personally directed by President Xi Jinping. Regular Chinese sea patrols monitor the area, driving away fishing boats from other nations from what it considers its exclusive fishing area. The intrusion of China into what other Asian nations consider their sovereign territory has caused tensions in the region to ratchet up, with the 10 members of the Association of Southeast Asian Nations (Asean) increasingly pushing back, at times with violent confrontations. The US has flatly rejected Chinese claims to the South China Sea, and has dramatically stepped up its military presence in the area. Each side has warned the other of the dangers of further escalation, with the US sanctioning Chinese firms that helped build China’s island outposts. Rarely a week goes by without a US warship sailing near Chinese held outputs as part a “freedom of navigation” exercise, shadowed by Chinese vessels the entire way. Confrontations have brought warships from both nations within a few metres of each other, a dangerous situation that could easily get out of hand. Tensions have ratched up recently, with the Chinese and US navies holding exercises in the region at the same time. In a provocation move, the Chinese test fired several of its “aircraft carrier killer” missiles in a clear warning to the US to back off its “interference” in the South China Sea. And some Asean nations are starting to push back against Chinese “intrusions” into their territorial waters, threatening to draw the US deeper into local disputes, though the group as a whole is trying to avoid picking sides in the US-China confrontation. The latest incident occurred this week, with Indonesia’s foreign ministry lodging an official protest after a Chinese coastguard ship spent two days sailing through Indonesia territorial waters. Chinese military commands have been ordered not to shoot first in any confrontation with the US military, but with heavily armed warships and planes constantly patrolling the area, even a small error in judgment could lead to a shooting war. And with the US presidential election less than two months away, there is no sign that tensions between two of the world’s largest militaries will de-escalate any time soon.

#### Nuclear war causes extinction – famine and climate change

Starr 18 [(Steven, the director of the University of Missouri’s Clinical Laboratory Science Program, as well as a senior scientist at the Physicians for Social Responsibility. He has worked with the Swiss, Chilean, and Swedish governments in support of their efforts at the United Nations to eliminate thousands of high-alert, launch-ready U.S. and Russian nuclear weapons; he maintains the website Nuclear Darkness.) “Consequences of a Single Failure of Nuclear Deterrence” PSR, University of Missouri, 5/2018. <https://www.psr.org/wp-content/uploads/2018/05/consequences-single-failure-nuclear-deterrence.pdf>] BC

Only a single failure of nuclear deterrence is required to start a nuclear war, and the consequences of such a failure would be profound. Peer-reviewed studies predict that less than 1% of the nuclear weapons now deployed in the arsenals of the Nuclear Weapon States, if detonated in urban areas, would immediately kill tens of millions of people, and cause long term, catastrophic disruptions of the global climate and massive destruction of Earth’s protective ozone layer. The result would be a global nuclear famine that could kill up to one billion people. A full-scale war, fought with the strategic nuclear arsenals of the United States and Russia, would so utterly devastate Earth’s environment that most humans and other complex forms of life would not survive.

Yet no Nuclear Weapon State has ever evaluated the environmental, ecological or agricultural consequences of the detonation of its nuclear arsenals in conflict. Military and political leaders in these nations thus remain dangerously unaware of the existential danger which their weapons present to the entire human race. Consequently, nuclear weapons remain as the cornerstone of the military arsenals in the Nuclear Weapon States, where nuclear deterrence guides political and military strategy.

Those who actively support nuclear deterrence are trained to believe that deterrence cannot fail, so long as their doctrines are observed, and their weapons systems are maintained and continuously modernized. They insist that their nuclear forces will remain forever under their complete control, immune from cyberwarfare, sabotage, terrorism, human or technical error. They deny that the short 12-to-30 minute flight times of nuclear missiles would not leave a President enough time to make rational decisions following a tactical, electronic warning of nuclear attack.

The U.S. and Russia continue to keep a total of 2000 strategic nuclear weapons at launch ready status – ready to launch with only a few minutes warning. Yet both nations are remarkably unable to acknowledge that this high-alert status in anyway increases the probability that these weapons will someday be used in conflict. How can strategic nuclear arsenals truly be “safe” from accidental or unauthorized use, when they can be launched literally at a moment’s notice? A cocked and loaded weapon is infinitely easier to fire than one which is unloaded and stored in a locked safe.

The mere existence of immense nuclear arsenals, in whatever status they are maintained, makes possible their eventual use in a nuclear war. Our best scientists now tell us that such a war would mean the end of human history. We need to ask our leaders: Exactly what political or national goals could possibly justify risking a nuclear war that would likely cause the extinction of the human race?

However, in order to pose this question, we must first make the fact known that existing nuclear arsenals – through their capacity to utterly devastate the Earth’s environment and ecosystems – threaten continued human existence. Otherwise, military and political leaders will continue to cling to their nuclear arsenals and will remain both unwilling and unable to discuss the real consequences of failure of deterrence. We can and must end the silence, and awaken the peoples of all nations to the realization that “nuclear war” means “global nuclear suicide”.

A Single Failure of Nuclear Deterrence could lead to:

• A nuclear war between India and Pakistan

• 50 Hiroshima-size (15 kiloton) weapons detonated in the mega-cities of both India and Pakistan (there are now 130-190 operational nuclear weapons which exist in the combined arsenals of these nations).

• The deaths of 20 to 50 million people as a result of the prompt effects of these nuclear detonations (blast, fire and radioactive fallout)

• Massive firestorms covering many hundreds of square miles/kilometers (created by nuclear detonations that produce temperatures hotter than those believed to exist at the center of the sun), that would engulf these cities and produce 6 to 7 million tons of thick, black smoke

• About 5 million tons of smoke that would quickly rise above cloud level into the stratosphere, where strong winds would carry it around the Earth in 10 days

• Smoke would completely surround the Earth; above the clouds, the smoke could not be rained out, and it would remain for 10 years to block and absorb sunlight

• 7-10% of warming sunlight would be blocked from reaching Earth’s surface

• Smoke heated by sun would heat the upper atmosphere and destroy the ozone

• 25% to 40% of the protective ozone layer would be destroyed at the midlatitudes, and 50-70% would be destroyed at northern and southern high latitudes

• Ozone destruction would cause the average UV Index to increase to 16-22 in the U.S, Europe, Eurasia and China, with even higher readings towards the poles (readings of 11 or higher are classified as “extreme” by the U.S. EPA). It would take 7-8 minutes for a fair skinned person to receive a painful sunburn at mid-day

• Loss of warming sunlight would quickly produce average surface temperatures in the Northern Hemisphere colder than any experienced in the last 1000 years

• Hemispheric drops in temperature would be about twice as large and last ten times longer than those which followed the largest volcanic eruption in the last 500 years, Mt. Tambora in 1816. The following year, 1817, was called “The Year Without Summer”, which saw famine in Europe from massive crop failures.

• Growing seasons in the Northern Hemisphere would be significantly shortened. It would be too cold to grow wheat in most of Canada for at least several years

• World grain stocks, which already are at historically low levels, would be completely depleted; grain exporting nations would likely cease exports in order to meet their own food needs

• The one billion already hungry people, who currently depend upon grain imports, would likely starve to death in the years following this nuclear war.

• The total explosive power in these 100 Hiroshima-size weapons is less than 1% of the total explosive power contained in the currently operational and deployed U.S. and Russian nuclear forces

## 1NC – CP

#### CP: Member nations of the World Trade Organization should enter into a prior and binding consultation with the World Health Organization over reducing intellectual property protections for medicines. Member nations will support the proposal and adopt the results of consultation.

#### WHO says yes

Kimball 5/7 [(Spencer, news editor with CNBC.com) “WHO chief urges world to follow U.S. lead and support waiving Covid vaccine patent protections,” CNBC, 5/7/2021] JL

World Health Organization Director General-Tedros Adhanom Ghebreyesus on Friday urged other countries, particularly the Group of Seven industrialized nations, to follow the U.S. example and support a World Trade Organization motion to temporarily waive Covid-19 vaccine patent protections.

“Wednesday’s announcement by the U.S. that it will support a temporary waiver of intellectual property protections for Covid-19 vaccines is a significant statement of solidarity and support for vaccine equity,” Tedros said at a press briefing. “I know that this is not a politically easy thing to do, so I very much appreciate the leadership of the U.S. and we urge other countries to follow their example.”

#### Consultation displays strong leadership, authority, and cohesion among member states which are key to WHO legitimacy

Gostin et al 15 [(Lawrence O., Linda D. & Timothy J. O’Neill Professor of Global Health Law at Georgetown University, Faculty Director of the O’Neill Institute for National & Global Health Law, Director of the World Health Organization Collaborating Center on Public Health Law & Human Rights, JD from Duke University) “The Normative Authority of the World Health Organization,” Georgetown University Law Center, 5/2/2015] JL

Members want the WHO to exert leadership, harmonize disparate activities, and set priorities. Yet they resist intrusions into their sovereignty, and want to exert control. In other words, ‘everyone desires coordination, but no one wants to be coordinated.’ States often ardently defend their geostrategic interests. As the Indonesian virus-sharing episode illustrates, the WHO is pulled between power blocs, with North America and Europe (the primary funders) on one side and emerging economies such as Brazil, China, and India on the other. An inherent tension exists between richer ‘net contributor’ states and poorer ‘net recipient’ states, with the former seeking smaller WHO budgets and the latter larger budgets.

Overall, national politics drive self-interest, with states resisting externally imposed obligations for funding and action. Some political leaders express antipathy to, even distrust of, UN institutions, viewing them as bureaucratic and inefficient. In this political environment, it is unsurprising that members fail to act as shareholders. Ebola placed into stark relief the failure of the international community to increase capacities as required by the IHR. Guinea, Liberia and Sierra Leone had some of the world's weakest health systems, with little capacity to either monitor or respond to the Ebola epidemic.20 This caused enormous suffering in West Africa and placed countries throughout the region e and the world e at risk. Member states should recognize that the health of their citizens depends on strengthening others' capacity. The WHO has a central role in creating systems to facilitate and encourage such cooperation.

The WHO cannot succeed unless members act as shareholders, foregoing a measure of sovereignty for the global common good. It is in all states' interests to have a strong global health leader, safeguarding health security, building health systems, and reducing health inequalities. But that will not happen unless members fund the Organization generously, grant it authority and flexibility, and hold it accountable.

#### WHO is critical to disease prevention – it is the only international institution that can disperse information, standardize global public health, and facilitate public-private cooperation

Murtugudde 20 [(Raghu, professor of atmospheric and oceanic science at the University of Maryland, PhD in mechanical engineering from Columbia University) “Why We Need the World Health Organization Now More Than Ever,” Science, 4/19/2020] JL

WHO continues to play an indispensable role during the current COVID-19 outbreak itself. In November 2018, the US National Academies of Sciences, Engineering and Medicine organised a workshop to explore lessons from past influenza outbreaks and so develop recommendations for pandemic preparedness for 2030. The salient findings serve well to underscore the critical role of WHO for humankind.

The world’s influenza burden has only increased in the last two decades, a period in which there have also been 30 new zoonotic diseases. A warming world with increasing humidity, lost habitats and industrial livestock/poultry farming has many opportunities for pathogens to move from animals and birds to humans. Increasing global connectivity simply catalyses this process, as much as it catalyses economic growth.

WHO coordinates health research, clinical trials, drug safety, vaccine development, surveillance, virus sharing, etc. The importance of WHO’s work on immunisation across the globe, especially with HIV, can hardly be overstated. It has a rich track record of collaborating with private-sector organisations to advance research and development of health solutions and improving their access in the global south.

It discharges its duties while maintaining a dynamic equilibrium between such diverse and powerful forces as national securities, economic interests, human rights and ethics. COVID-19 has highlighted how political calculations can hamper data-sharing and mitigation efforts within and across national borders, and WHO often simply becomes a convenient political scapegoat in such situations.

International Health Regulations, a 2005 agreement between 196 countries to work together for global health security, focuses on detection, assessment and reporting of public health events, and also includes non-pharmaceutical interventions such as travel and trade restrictions. WHO coordinates and helps build capacity to implement IHR.

#### Extinction – defense is wrong

Piers Millett 17, Consultant for the World Health Organization, PhD in International Relations and Affairs, University of Bradford, Andrew Snyder-Beattie, “Existential Risk and Cost-Effective Biosecurity”, Health Security, Vol 15(4), http://online.liebertpub.com/doi/pdfplus/10.1089/hs.2017.0028

Historically, disease events have been responsible for the greatest death tolls on humanity. The 1918 flu was responsible for more than 50 million deaths,1 while smallpox killed perhaps 10 times that many in the 20th century alone.2 The Black Death was responsible for killing over 25% of the European population,3 while other pandemics, such as the plague of Justinian, are thought to have killed 25 million in the 6th century—constituting over 10% of the world’s population at the time.4 It is an open question whether a future pandemic could result in outright human extinction or the irreversible collapse of civilization.

A skeptic would have many good reasons to think that existential risk from disease is unlikely. Such a disease would need to spread worldwide to remote populations, overcome rare genetic resistances, and evade detection, cures, and countermeasures. Even evolution itself may work in humanity’s favor: Virulence and transmission is often a trade-off, and so evolutionary pressures could push against maximally lethal wild-type pathogens.5,6

While these arguments point to a very small risk of human extinction, they do not rule the possibility out entirely. Although rare, there are recorded instances of species going extinct due to disease—primarily in amphibians, but also in 1 mammalian species of rat on Christmas Island.7,8 There are also historical examples of large human populations being almost entirely wiped out by disease, especially when multiple diseases were simultaneously introduced into a population without immunity. The most striking examples of total population collapse include native American tribes exposed to European diseases, such as the Massachusett (86% loss of population), Quiripi-Unquachog (95% loss of population), and theWestern Abenaki (which suffered a staggering 98% loss of population).

In the modern context, no single disease currently exists that combines the worst-case levels of transmissibility, lethality, resistance to countermeasures, and global reach. But many diseases are proof of principle that each worst-case attribute can be realized independently. For example, some diseases exhibit nearly a 100% case fatality ratio in the absence of treatment, such as rabies or septicemic plague. Other diseases have a track record of spreading to virtually every human community worldwide, such as the 1918 flu,10 and seroprevalence studies indicate that other pathogens, such as chickenpox and HSV-1, can successfully reach over 95% of a population.11,12 Under optimal virulence theory, natural evolution would be an unlikely source for pathogens with the highest possible levels of transmissibility, virulence, and global reach. But advances in biotechnology might allow the creation of diseases that combine such traits. Recent controversy has already emerged over a number of scientific experiments that resulted in viruses with enhanced transmissibility, lethality, and/or the ability to overcome therapeutics.13-17 Other experiments demonstrated that mousepox could be modified to have a 100% case fatality rate and render a vaccine ineffective.18 In addition to transmissibility and lethality, studies have shown that other disease traits, such as incubation time, environmental survival, and available vectors, could be modified as well.19-2

#### WHO diplomacy solves great power conflict

Murphy 20 [(Chris, U.S. senator from Connecticut serving on the U.S. Senate Foreign Relations Committee) “The Answer is to Empower, Not Attack, the World Health Organization,” War on the Rocks, 4/21/2020] JL

The World Health Organization is critical to stopping disease outbreaks and strengthening public health systems in developing countries, where COVID-19 is starting to appear. Yemen announced its first infection earlier this month, and other countries in Africa, Asia and the Middle East are at severe risk. Millions of refugees rely on the World Health Organization for their health care, and millions of children rely on the WHO and UNICEF to access vaccines.

The World Health Organization is not perfect, but its team of doctors and public health experts have had major successes. Their most impressive claim to fame is the eradication of smallpox – no small feat. More recently, the World Health Organization has led an effort to rid the world of two of the three strains of polio, and they are close to completing the trifecta.

These investments are not just the right thing to do; they benefit the United States. Improving health outcomes abroad provides greater political and economic stability, increasing demand for U.S. exports. And, as we are all learning now, it is in America’s national security interest for countries to effectively detect and respond to potential pandemics before they reach our shores.

As the United States looks to develop a new global system of pandemic prevention, there is absolutely no way to do that job without the World Health Organization. Uniquely, it puts traditional adversaries – like Russia and the United States, India and Pakistan, or Iran and Saudi Arabia – all around the same big table to take on global health challenges. It has relationships with the public health leaders of every nation, decades of experience in tackling viruses and diseases, and the ability to bring countries together to tackle big projects. This ability to bridge divides and work across borders cannot be torn down and recreated – not in today’s environment of major power competition – and so there is simply no way to build an effective international anti-pandemic infrastructure without the World Health Organization at the center.

#### Ought means should

Merriam Webster, No Date – Merriam Webster’s Learner’s Dictionary, “ought”, <http://www.learnersdictionary.com/definition/ought>  
ought /ˈɑːt/ verb  
Learner's definition of OUGHT [modal verb] 1 ◊ Ought is almost always followed by to and the infinitive form of a verb. The phrase ought to has the same meaning as should and is used in the same ways, but it is less common and somewhat more formal. The negative forms ought not and oughtn't are often used without a following to. — used to indicate what is expected They ought to be here by now. You ought to be able to read this book. There ought to be a gas station on the way. 2 — used to say or suggest what should be done You ought to get some rest. That leak ought to be fixed. You ought to do your homework.

#### Should is certain and immediate

Summers 94 (Justice – Oklahoma Supreme Court, “Kelsey v. Dollarsaver Food Warehouse of Durant”, 1994 OK 123, 11-8, http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn13)

¶4 The legal question to be resolved by the court is whether the word "should"[13](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn13) in the May 18 order connotes futurity or may be deemed a ruling in praesenti.[14](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn14) The answer to this query is not to be divined from rules of grammar;[15](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn15) it must be governed by the age-old practice culture of legal professionals and its immemorial language usage. To determine if the omission (from the critical May 18 entry) of the turgid phrase, "and the same hereby is", (1) makes it an in futuro ruling - i.e., an expression of what the judge will or would do at a later stage - or (2) constitutes an in in praesenti resolution of a disputed law issue, the trial judge's intent must be garnered from the four corners of the entire record.[16](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn16) [CONTINUES – TO FOOTNOTE] [13](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker2fn13) "*Should*" not only is used as a "present indicative" synonymous with *ought* but also is the past tense of "shall" with various shades of meaning not always easy to analyze. See 57 C.J. Shall § 9, Judgments § 121 (1932). O. JESPERSEN, GROWTH AND STRUCTURE OF THE ENGLISH LANGUAGE (1984); St. Louis & S.F.R. Co. v. Brown, 45 Okl. 143, 144 P. 1075, 1080-81 (1914). For a more detailed explanation, see the Partridge quotation infra note 15. Certain contexts mandate a construction of the term "should" as more than merely indicating preference or desirability. Brown, supra at 1080-81 (jury instructions stating that jurors "should" reduce the amount of damages in proportion to the amount of contributory negligence of the plaintiff was held to imply an *obligation* *and to be more than advisory*); Carrigan v. California Horse Racing Board, 60 Wash. App. 79, [802 P.2d 813](http://www.oscn.net/applications/oscn/deliverdocument.asp?box1=802&box2=P.2D&box3=813) (1990) (one of the Rules of Appellate Procedure requiring that a party "should devote a section of the brief to the request for the fee or expenses" was interpreted to mean that a party is under an *obligation* to include the requested segment); State v. Rack, 318 S.W.2d 211, 215 (Mo. 1958) ("should" would mean the same as "shall" or "must" when used in an instruction to the jury which tells the triers they "should disregard false testimony"). [14](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker2fn14) In praesenti means literally "at the present time." BLACK'S LAW DICTIONARY 792 (6th Ed. 1990). In legal parlance the phrase denotes that which in law is presently or immediately effective, as opposed to something that will or would become effective in the future *[in futurol*]. See Van Wyck v. Knevals, [106 U.S. 360](http://www.oscn.net/applications/oscn/deliverdocument.asp?box1=106&box2=U.S.&box3=360), 365, 1 S.Ct. 336, 337, 27 L.Ed. 201 (1882).

## 1NC – T

#### Interpretation – topical affs must defend a reduction of intellectual property protections for *medicines*.

#### Violation – they reduce IP protections on *vaccines* which is categorically distinct

#### Medicines are drugs

Senate Journal 12 [(SENATE JOURNAL STATE OF ILLINOIS )”NINETY-SEVENTH GENERAL ASSEMBLY 92ND LEGISLATIVE DAY”, <https://www.ilga.gov/senate/journals/97/2012/SJ097092R.pdf>, MARCH 8, 2012]

Medicines means and includes all drugs intended for human or veterinary use approved by the United States Food and Drug Administration.

#### Vaccines are not drugs

He et al 12 [(Yongqun, Professor of Microbiology and Immunology at the University of Michigan Medical School, primary bioinformatics interests are development of biomedical ontologies and their applications in literature mining, Bayesian network modeling, microbial genomics, and vaccine informatics)“A 2012 Workshop: Vaccine and Drug Ontology in the Study of Mechanism and Effect,” Journal of Biomedical Semantics, 12/18/2012] JL

Innovative therapeutic interventions are critical to prevent and treat human and animal diseases. A way to broadly classify therapeutic interventions is through their timing in administration: Vaccines are classically administered to prevent the appearance of a medical problem, while drugs are generally administered to treat a medical problem. Noticeable exceptions can be found for both classes of therapeutic interventions such as cancer vaccines (that are administered after detection of the problem), and protein pump inhibitors (that are often administered to prevent gastric problems in co-therapy with other drugs or in specific hospital settings). Nevertheless, vaccines and drugs are similarly regulated both in research and development, manufacturing, clinical trials, government approval and regulation, and post-licensing usage surveillance and monitoring. In a broader scope, vaccine is a special type of drug. Vaccines and drugs also have many differences. For example, for vaccines, dose, time, route, and frequency of administration are generally known quite precisely. However, since drugs are used for patients with different conditions, dose, time, and frequency of drug administration are often very difficult to establish. Since vaccines are often administered to healthy people to prevent medical problems, attribution of an adverse event following vaccination is less likely to be confounded by signs or symptoms of underlying medical problems as it is with drugs that are administered to treat medical problems. However, separation of manifestation of medical problem from manifestation of drug adverse event is often very challenging. In the U.S.A, vaccines are regulated under different laws by the Center for Biologics (CBER) at FDA, while drugs are regulated under the Food Drug and Cosmetic Act by the Center for Drugs (CDER) at FDA. Safety surveillance for vaccines is for the most part carried out by the Center for Disease Control (CDC) in Atlanta, while for drugs it is carried out by the FDA. Due to these similarities and differences between vaccines and drugs, a closer communication between these two areas is important to create effective ontological frameworks around which we can build comparative and predictive systems for both vaccines and drugs.

#### Vaccines are medical interventions not medicines

Elbe 10 (Stefan Elbe, [director of the Centre for Global Health Policy and a professor of international relations at the University of Sussex. He is the author of Strategic Implications of HIV/AIDS, Security and Global Health, and Virus Alert: Security, Governmentality, and the AIDS Pandemic.], 5-3-2010, “Security and Global Health” Polity Press, accessed: 8-9-2021, https://books.google.com/books?id=PKMoMJrSsksC) ajs

Yet here too we must be careful not to overlook other types of medical intervention simultaneously pursued by the 'social' arm of modern medicine at the population level. Vaccines in particular continue to be particularly important medical interventions that repeatedly surface in a variety of different health security delib- erations. Strictly speaking, vaccines are not medicines because they consist of small concentrations of disease-causing microbes (or their derivatives) used to enhance a person's immuno-response to a future infection. As a public health measure, vaccines have therefore also been largely sidelined in the existing medicalization literature. Yet, generally speaking, vaccines too can be considered as medical inter- ventions. That is certainly how the World Health Organization views them, pointing out that 'vaccines are among the most important medical interventions for reducing illness and deaths' available today (WHO 2009a). Whereas pills and other therapies mark the tools of clinical medicine, vaccines play a crucial part in the arsenal of 'social' medicine and public health. Developing and rolling out of new vaccines against a range of current (and future) diseases therefore represents further evidence of how the rise of health security is also encouraging security to be practised through the introduction of new medical interventions in society.

#### Prefer –

#### Limits – allowing non medicines explodes limits to include affs that defend reducing protections for surgeries, therapy, injury prevention, cosmetic procedures, etc. - makes neg prep impossible because the case neg to the Botox and Laser Eye Surgery affs would have no overlap -- privileges the aff by stretching pre-tournament neg prep too thin and precluding nuanced rigorous testing of aff.

#### Ground – arbitrarily not defending medicines kills links to core neg generics about drug innovation, competition over pharmaceutical development, or production of medicine needing to increase because medical interventions are uncontroversial. Drugs and Vaccines are not regulated in the same way which proves any lit about why WTO changing protections for one would not be applicable to the other – that’s He. Pushes 1NCs to the fringes like Ks that disagree with everything or sketchy CPs which destroys clash.

#### Paradigm issues –

#### Drop the debater – their abusive advocacy skewed the debate from the start

#### Comes before 1AR theory – NC abuse is responsive to them not being topical

#### Competing interps – reasonability invites arbitrary judge intervention and a race to the bottom of questionable argumentation

#### Fairness is a voter ­– necessary to determine the better debater

#### Education is a voter – why schools fund debate

## 1NC – CP

#### CP: Member nations of the World Trade Organization should waive intellectual property protections for Covid-19 related medicines except for Remdesivir.

#### Remdesivir patents are key to profits that enable continued production and future innovation

Mossoff 20 [(Adam, Professor of Law at Antonin Scalia Law School, George Mason University, teaches a wide range of courses at the law school, including property, patent law, trade secrets, trademark law, remedies, and internet law, Visiting Intellectual Property Fellow at the Heritage Foundation, JD from the University of Chicago Law School) “US Should Not Confiscate Gilead's Remdesivir Patent,” Law360, 8/21/2020] JL

These politicians allege that since the U.S. helped pay for some of remdesivir's clinical trials, the federal government can use its march-in power in a 1980 law to appropriate Gilead's patent and license it to generic manufacturers to lower the price and increase availability of the drug.  
  
At first glance, their argument may seem appealing. Unfortunately, the state AGs' letter is another example of populist rhetoric contrary to both law and reason. The state AGs clearly don't understand the law in question — or the drug development process. If they succeed, this would sanction government theft of patents that will chill innovation and harm patients.  
  
First, consider how their proposal rests on a foundation of sand.  
  
The 1980 law they cite, the Bayh-Dole Act, was not enacted for the purpose of government confiscation of patents. Congress enacted this law to facilitate universities and other research institutions to obtain patents and then license their innovations in the marketplace. Before 1980, no one knew who owned inventions if one cent of federal funding was used in the basic research that led to the patent. As a result, life-saving innovations sat on the shelf in the university lab.  
  
Bayh-Dole changed this. As former Sen. Bob Dole, R-Kan., recently observed, his legislation spurred the licensing of new innovations, promoted thousands of startups, and led to massive economic growth. It contributed to the explosion in new drugs over the past 40 years that have turned what were once death sentences into manageable conditions — from cancer to diabetes to hepatitis.  
  
Bayh-Dole does authorize a march-in power for the federal government to take patents and license them under very limited conditions. Contrary to the state AGs' claim, this is not an authorization for the federal government to confiscate patents merely to lower a price by expanding production. The National Institutes of Health has repeatedly stated that "the extraordinary remedy of march-in is not an appropriate means of controlling prices."  
  
Since 1980, bipartisan administrations have consistently rejected lobbying efforts to use the march-in power for the purpose of lowering prices of drugs. They did so for one simple reason: Bayh-Dole does not authorize it.  
  
But there's a more basic legal problem with the state AGs' letter: Bayh-Dole doesn't even apply to remdesivir. The company readily acknowledges working with universities and the U.S. military in testing the drug, but it was invented by and patented by Gilead researchers. The chief patent counsel for the U.S. Army Medical Research Institute of Infectious Diseases, or USAMRIID, which assisted Gilead in some of the later-stage testing, recently stated that its contributions did "not qualify USAMRIID as a joint inventor of the compound."  
  
Remdesivir is an example of the miracle drugs created by the modern biopharmaceutical sector. Researchers at Gilead labored for more than a decade and ultimately the company will spend more than a billion dollars in R&D expenditures on the drug. This is typical of the average time and R&D expenditures that lead to all life-enhancing drugs today.  
  
The federal government's total funding of remdesivir's testing, and the additional funding provided in response to the COVID-19 pandemic, ranged from $30 million to $70 million. These federal monies are a minuscule fraction — approximately 3% to 7% — of the total $1 billion plus in private investments ultimately made by Gilead in this life-saving medicine. For this, the state AGs would have the federal government confiscate Gilead's entire patent.  
  
This is not what Bayh-Dole was intended to do, as Dole has made clear. It was not enacted to justify confiscation of the patents that this law made possible in the first place. It was especially not enacted to justify confiscation simply to lower prices given massive disparities in federal funding versus private funding of the R&D in a life-saving drug.  
  
The politicians and activists lobbying since February for the government to invoke its march-in power for any COVID-19 drugs do a disservice to innovators and to the American patients who benefit from the fruits of their inventive labors.  
  
If the government can twist the Bayh-Dole law and arbitrarily decide when to confiscate patents, companies like Gilead will no longer risk billions of dollars and decades of research in creating miracle drugs like remdesivir. We will never see cures for diseases like Alzheimer's and ultimately for pandemics like COVID-19.

#### Remdesivir substantially reduces COVID mortality – turns case

Antrim 7/27 [(Aislinn, assistant editor at Pharmacy Times, BA in journalism from the University of North Carolina) “Remdesivir Associated With Reduction in Mortality Rate in Hospitalized Patients with COVID-19,” Pharmacy Times, 7/27/2021] JL

Three analyses of large, retrospective, real-world data sets have found that remdesivir was associated with a reduction in mortality rates in patients hospitalized with COVID-19, according to a Gilead press release. Remdesivir is indicated for hospitalized adults and pediatric patients 12 years of age and older and weighing at least 40 kg for the treatment of COVID-19.

The 3 data analyses include 98,654 patients who were hospitalized with COVID-19. Two of the studies observed treatment trends and outcomes in the United States using the HealthVerity and Premier Healthcare databases, whereas the third analysis compared clinical outcomes in patients receiving a 10-day treatment course of remdesivir in the extension phase of the SIMPLE-Severe study.

“Clinical trials help us understand the efficacy and safety profile of a treatment, but their size can limit our ability to assess all potential aspects of a treatment’s effect due to low event rates in the trials,” said Robert L. Gottlieb, MD, PhD, a cardiologist at the Baylor University Medical Center, in a press release. “Large real-world datasets with greater sample sizes and robust methodologies can be helpful to assess treatment effects in both the overall patient population and in clinically relevant subsets of patients.”

This reduction in mortality was observed across a spectrum of baseline oxygen requirements, and the results were consistent at different timeframes over the course of the pandemic and across geographies, according to the researchers. Two of the studies also found that patients who received remdesivir had a significantly increased chance of discharge from the hospital by day 28.

The analysis of data from HealthVerity matched 24,856 patients treated with remdesivir 1:1 with matched controls between May 1, 2020, and May 3, 2021. Researchers found that in the overall population, patients receiving remdesivir had a statistically significant 23% lower mortality risk compared with patients in the control arm, regardless of baseline oxygen requirement.

Investigators also observed a significantly greater likelihood of discharge by day 28 in patients who completed a full 5-day course of remdesivir compared with patients in the control arm. This result was most pronounced in patients with lower oxygen requirements at baseline.

Similarly, an analysis of data from the Premier Healthcare Database found that patients treated with remdesivir had a significantly lower risk of mortality at days 14 and 28 compared with patients who did not receive remdesivir. Patients who received remdesivir and either no oxygen, low-flow oxygen, invasive mechanical ventilation, or extracorporeal membrane oxygenation (ECMO) at baseline had a significantly lower risk of 14-day mortality.

A significant reduction in mortality was also seen at day 28 for these same groups of patients, and patients on high-flow oxygen at baseline who received remdesivir also had significantly lower 14-day mortality. At 28 days, the difference in mortality in patients receiving high-flow oxygen at baseline was not statistically significant.

The SIMPLE-Severe study evaluated hospitalized adult patients with severe COVID-19. Investigators found that in the overall population, treatment with remdesivir was associated with a statistically significant 54% lower mortality risk at 28 days compared to patients who were not treated with remdesivir, regardless of baseline oxygen requirements.

Furthermore, patients who completed a full 10-day course of treatment had a significantly shorter time to discharge within 28 days, compared to patients who did not receive remdesivir. The result for time to discharge was not significant for patients receiving mechanical ventilation or ECMO at baseline.

Finally, in the double-blind, placebo-controlled ACTT-1 clinical trial, investigators noted a trend toward reduced mortality at day 29 among patients who were treated with remdesivir compared with placebo, although this result was not statistically significant.

Researchers also conducted a post-hoc analysis with no adjustment for multiple testing and determined that patients who required low-flow oxygen at baseline and who received remdesivir achieved a statistically significant 70% reduction in mortality at day 29, although this reduction was not statistically significant in the other groups.

## 1NC – Case

### Framing

**Moral uncertainty means preventing extinction should be our highest priority.  
Bostrom 12** [Nick Bostrom. Faculty of Philosophy & Oxford Martin School University of Oxford. “Existential Risk Prevention as Global Priority.” Global Policy (2012)]  
These reflections on **moral uncertainty suggest** an alternative, complementary way of looking at existential risk; they also suggest a new way of thinking about the ideal of sustainability. Let me elaborate.¶ **Our present understanding of axiology might** well **be confused. We may not** nowknow — at least not in concrete detail — what outcomes would count as a big win for humanity; we might not even yet **be able to imagine the best ends** of our journey. **If we are** indeedprofoundly **uncertain** about our ultimate aims,then we should recognize that **there is a great** option **value in preserving** — and ideally improving — **our ability to recognize value and** to **steer the future accordingly. Ensuring** that **there will be a future** version of **humanity** with great powers and a propensity to use them wisely **is** plausibly **the best way** available to us **to increase the probability that the future will contain** a lot of **value.** To do this, we must prevent any existential catastrophe.

**Reducing the risk of extinction is always priority number one.   
Bostrom 12** [Faculty of Philosophy and Oxford Martin School, University of Oxford.], Existential Risk Prevention as Global Priority.  Forthcoming book (Global Policy). MP. [http://www.existenti...org/concept.pdf](http://www.existential-risk.org/concept.pdf)Even if we use the most conservative of these estimates, which entirely ignores the   possibility of space colonization and software minds, **we find that the expected loss of an existential   catastrophe is greater than the value of 10^16 human lives**.  **This implies that the expected value of   reducing existential risk by a mere one millionth of one percentage point is at least a hundred times the   value of a million human lives.**  The more technologically comprehensive estimate of 10  54 humanbrain-emulation subjective life-years (or 10  52  lives of ordinary length) makes the same point even   more starkly.  Even if we give this allegedly lower bound on the cumulative output potential of a   technologically mature civilization a mere 1% chance of being correct, we find that the expected   value of reducing existential risk by a mere one billionth of one billionth of one percentage point is worth   a hundred billion times as much as a billion human lives. **One might consequently argue that even the tiniest reduction of existential risk has an   expected value greater than that of the definite provision of any ordinary good, such as the direct   benefit of saving 1 billion lives.**  And, further, that the absolute value of the indirect effect of saving 1  billion lives on the total cumulative amount of existential riskâ€”positive or negativeâ€”is almost   certainly larger than the positive value of the direct benefit of such an action.

### Advantage

#### COVID inevitable even with vaccines – antibodies fade and high transmissibility

Zhang 20 [(Sarah, staff writer at The Atlantic, winner of a 2018 AAAS Kavli Science Journalism Silver Award) “The Coronavirus Is Never Going Away,” The Atlantic, 8/4/2020] JL

The coronavirus is simply too widespread and too transmissible. The most likely scenario, experts say, is that the pandemic ends at some point—because enough people have been either infected or vaccinated—but the virus continues to circulate in lower levels around the globe. Cases will wax and wane over time. Outbreaks will pop up here and there. Even when a much-anticipated vaccine arrives, it is likely to only suppress but never completely eradicate the virus. (For context, consider that vaccines exist for more than a dozen human viruses but only one, smallpox, has ever been eradicated from the planet, and that took 15 years of immense global coordination.) We will probably be living with this virus for the rest of our lives.

Back in the winter, public-health officials were more hopeful about SARS-CoV-2, the coronavirus that causes COVID-19. SARS, a closely related coronavirus, emerged in late 2002 and infected more than 8,000 people but was snuffed out through intense isolation, contact tracing, and quarantine. The virus was gone from humans by 2004. SARS and SARS-CoV-2 differ in a crucial way, though: The new virus spreads more easily—and in many cases asymptomatically. The strategies that succeeded with SARS are less effective when some of the people who transmit COVID-19 don’t even know they are infected. “It’s very unlikely we’re going to be able to declare the kind of victory we did over SARS,” says Stephen Morse, an epidemiologist at Columbia University.

If not, then what does the future of COVID-19 look like? That will depend, says Yonatan Grad, on the strength and duration of immunity against the virus. Grad, an infectious-disease researcher at Harvard, and his colleagues have modeled a few possible trajectories. If immunity lasts only a few months, there could be a big pandemic followed by smaller outbreaks every year. If immunity lasts closer to two years, COVID-19 could peak every other year.

At this point, how long immunity to COVID-19 will last is unclear; the virus simply hasn’t been infecting humans long enough for us to know. But related coronaviruses are reasonable points of comparison: In SARS, antibodies—which are one component of immunity—wane after two years. Antibodies to a handful of other coronaviruses that cause common colds fade in just a year. “The faster protection goes away, the more difficult for any project to try to move toward eradication,” Grad told me.

This has implications for a vaccine, too. Rather than a onetime deal, a COVID-19 vaccine, when it arrives, could require booster shots to maintain immunity over time. You might get it every year or every other year, much like a flu shot.

Even if the virus were somehow eliminated from the human population, it could keep circulating in animals—and spread to humans again. SARS-CoV-2 likely originated as a bat virus, with a still-unidentified animal perhaps serving as an intermediate host, which could continue to be a reservoir for the virus. (SARS also originated in bats, with catlike palm civets serving as an intermediate host—which led officials to order the culling of thousands of civets.) Timothy Sheahan, a virologist at the University of North Carolina at Chapel Hill, wonders if, with SARS-CoV-2 so widespread across the globe, humans might be infecting new species and creating new animal reservoirs. “How do you begin to know the extent of virus spread outside of the human population and in wild and domestic animals?” he says. So far, tigers at the Bronx Zoo and minks on Dutch farms seem to have caught COVID-19 from humans and, in the case of the minks, passed the virus back to humans who work on the farm.

The existence of animal reservoirs that can keep reinfecting humans is also why scientists don’t speak of “eradication” for these viruses. The Ebola virus, for example, probably comes from bats. Even though human-to-human transmission of Ebola eventually ended in the West African epidemic in 2016, the virus was still somewhere on Earth and could still infect humans if it found the right host. And indeed, in 2018, Ebola broke out again in the Democratic Republic of the Congo. Ebola can be contained through contact tracing, isolation, and a new vaccine, but it cannot be “eradicated.” No one is quite sure why SARS has never reemerged from an animal reservoir, but this coronavirus could well follow a different pattern.

#### Waivers don’t improve vaccine supply or distribution, but do allow for poorly made vaccines that undermine vaccine confidence

Delgado 5/25 [(Carla, health & culture journalist who’s written for Insider, Architectural Digest, Elemental, Observer, and Mental Floss) “Experts Say Patent Waivers Aren't Enough To Increase Global Vaccination,” Verywell Health, 5/25/2021] JL

“Waiving intellectual property rights for COVID-19 vaccines is likely to only have a modest impact on global vaccine supply,” William Moss, MD, executive director of the International Vaccine Access Center at the Johns Hopkins Bloomberg School of Public Health, tells Verywell. “A vaccine IP waiver is not in itself likely to lead to increased vaccine production in less developed countries because much more needs to be in place to increase the global vaccine supply.”

For several countries outside of the U.S. that have the necessary equipment to produce mRNA vaccines effectively and safely, the IP waiver can be of great help. However, many more countries lack this capacity, and this move still leaves them behind.

“The majority of the world’s countries lack the capacity to produce and distribute COVID-19 vaccines, and especially at the scale required to get this pandemic under control,” Richard Marlink, MD, director of the Rutgers Global Health Institute, tells Verywell. “They need funding, manufacturing facilities, raw materials, and laboratory staff with the technological expertise required.”

We've already seen what can go wrong with substandard vaccine manufacturing. In April, the Food and Drug Administration (FDA) inspected the Emergent BioSolutions factory in Baltimore and consequently shut down their production after concerning observations, which include:3

The factory was not maintained in a clean and sanitary condition.

Waste handling was found to be inadequate because generated waste was transported through the warehouse before disposal, which can potentially contaminate other areas.

Employees were seen dragging unsealed bags of medical waste from the manufacturing area across the warehouse.

Peeling paint, paint flecks, loose particles/debris were observed. There were also damaged floors and rough surfaces that cannot be properly cleaned and sanitized.

Employees were seen removing their protective garments where raw materials were staged for manufacturing.

They reportedly spoiled about 15 million doses of the Johnson and Johnson COVID-19 vaccine, and more than 100 million doses are on hold as regulators inspect them for possible contamination.4

“Vaccines are complex biological products, much more complex than drugs, and need to be produced by manufacturers and in facilities with the highest quality control standards,” Moss says. “Adverse events associated with a poorly made or contaminated batch of vaccines would have a devastating impact on vaccine confidence.”

In a statement last October, Moderna announced that they will not enforce their COVID-19-related patents against those who will make vaccines during this pandemic.5 While waiving some vaccine patents may allow third-party manufacturers to make and sell COVID-19 vaccines, the transfer of skills and technology that will allow them to manage production isn't very simple.

For instance, a spokesperson for Pfizer said that the Pfizer-BioNTech vaccine required 280 different components sourced from 86 suppliers across various countries. Manufacturing the vaccine would require highly specialized equipment and complex technology transfers.6

“Technology transfer also would need to be a critical component to expand vaccine manufacturing by other companies as an IP waiver is insufficient to provide the ‘know how’ needed to manufacture mRNA or adenovirus-vectored COVID-19 vaccines,” Moss says. “And supply chains for the reagents, supplies, and equipment would be needed.”

Interested manufacturers would need to have the proper equipment to test the quality and consistency of their manufacturing. At present, the World Health Organization (WHO) has plans to facilitate the establishment of technology hubs to transfer "a comprehensive technology package and provide appropriate training" to manufacturers from lower- and middle-income countries.7

While waiving vaccine patents is necessary, it's likely not enough. Additionally, negotiations about it are still ongoing. Even though the U.S. supports the waiver of COVID-19 vaccine patents, other countries like the United Kingdom, Japan, and Germany oppose it.8

It's also important to remember that manufacturing vaccines is only one step of the process of vaccinating the global population—distributing it is yet another hurdle.

“Many countries are counting on COVAX, a global collaboration to distribute COVID-19 vaccines more equitably around the world,” Marlink says. “The single largest supplier to COVAX is in India, where exports have been suspended since March due to the country’s COVID-19 crisis.”

#### TRIPs waiver is a symbolic gesture that prevents vaccine production and distribution

Ikenson 6/25 [(Dan, former director of the Cato Institute's Herbert A. Stiefel Center for Trade Policy Studies, MA in economics from George Washington University) “Stop Blaming Patents For The World’s Low Vaccination Rates,” Forbes, 6/25/2021] JL

The premise of the need for a TRIPS waiver is simply absurd. It serves to divert attention from the failures of governments to protect their citizens with smart public health policies and, importantly, to demonize intellectual property protections more broadly. Governments are already free to waive IP protections and to engage in compulsory licensing in times of health crises but have not done so because patents are not the bottleneck. The bottlenecks result from limited global expertise in the highly technical process of producing the vaccine, the dearth of production facilities and capacity to ramp up production at existing facilities, the tight supply of crucial pharmaceutical ingredients (including vials, bags, and other components), and the limited distribution channels through which the proper handling of vaccines at proper temperatures can be assured.

To be sure, global health officials and biopharmaceutical companies have been working to resolve these real bottlenecks—a process that has benefited significantly from the fact that U.S. officials have more bandwidth to devote more attention and other resources to these matters precisely because U.S. vaccination efforts have been successful. And why have they been successful? In large measure, they have been successful because intellectual property protections have bred expectations of future intellectual property protections, which has invited and enabled an accumulation of R&D investment, infrastructure, and expertise in the United States.

The effort to surmount these real impediments to producing, distributing, and injecting vaccines is not made any easier by a symbolic waiver of IP protections—and may be made more difficult. The volume of vaccines necessary to ending the pandemic requires governments and public health officials to coordinate and focus on ramping up the capacity to produce and distribute, and to safeguard against the squandering of pharmaceutical ingredients by ensuring those inputs are channeled to producers with expertise in manufacturing and distribution. On the contrary, suspending IP protection might encourage novice firms with no expertise to end up wasting limited, essential ingredients.

#### Waivers antagonize drug-makers and manufacturers which reduces vaccine production

Furlong 4/21 [(Ashleigh, health care reporter for POLITICO, based in London, former reporter at the science policy publication Research Fortnight who covered biomedical research policy) “Why waiving patents might not boost global access to coronavirus vaccines,” Politico EU, 4/21/2021] JL

Lifting IP rules may make it pretty straightforward to make some types of drugs where technology transfer isn’t important, said ‘t Hoen. For example, during the pandemic, both Hungary and Russia have issued compulsory licenses for remdesivir, with both countries then producing the drug. But that’s not true for vaccines.

A vaccine patent prevents another company from producing the same product. But even without a patent in the way, the company that produced the vaccine holds an enormous amount of relevant know-how that it's not going to turn over for free. So when drugmakers make deals with other manufacturers to produce their vaccine, they transfer this knowledge along under strict agreements. For example, AstraZeneca reached a licensing agreement with the Serum Institute of India last June that ensured that SII treats AstraZeneca as a priority customer in return for access to the technology behind the Oxford/AstraZeneca vaccine.

Compulsory licensing may also be an over-hyped solution, aside from removing the possibility of being sued for patent infringement, says Guilherme Cintra, director of innovation policy at the International Federation of Pharmaceutical Manufacturers and Associations, a pharma lobby. It could actually be "an antagonistic move," he added. "In a way it removes trust, and undermines the possibility of engaging in good faith to build up manufacturing."

#### The plan alienates pharma companies and doesn’t solve lack of vaccine purchasing

Glassman 5/6 [(Amanda, executive vice president and senior fellow at the Center for Global Development, research focuses on priority-setting, resource allocation and value for money in global health, former director for global health policy at the Center from 2010 to 2016, former deputy director of the Global Health Financing Initiative at Brookings and carried out policy research on aid effectiveness and domestic financing issues in the health sector in low-income countries, MSc from the Harvard School of Public Health) “Big Pharma Is Not the Tobacco Industry,” Barrons, 5/6/2021] JL

In fact, several of them did just that in the pandemic: invested their own money to develop patented manufacturing technologies in record time. Those technologies are literally saving the world right now. Public funding supported research and development, but companies also brought their own proprietary ingenuity and private investments to bear toward solving the world’s singular, collective challenge. Their reward should be astronomical given the insane scale of the health and economic benefits these highly efficacious vaccines produce every day. Market incentives sent a clear signal that further needed innovation—greater efficacy, single doses, more-rapid manufacturing, updated formulations, fast boosters, and others—would be richly rewarded. Market incentives could also have been used to lubricate supply lines and buy vaccines on behalf of the entire world; with enough money, incredible things can happen.

But activist lobbying to waive patents—a move the Biden administration endorsed yesterday—sends exactly the opposite signal. It says that the most important, valuable innovations will be penalized, not rewarded. It tells innovators, don’t bother attacking the most important global problems; instead, throw your investment dollars at the next treatment for erectile disfunction, which will surely earn you a steady return with far less agita.

It is worth going back to first principles. What problem are we trying to solve? We have highly efficacious vaccines that we would like to get out to the entire world as quickly as possible to minimize preventable disease and deaths, address atrocious inequities, and enable the reopening of society, trade, and commerce. Hundreds of millions of people have been plunged into poverty over the past year; in the developing world, the pandemic is just getting started.

What is the quickest way to get this done? Vaccine manufacturing is not just a recipe; if you attack and undermine the companies that have the know-how, do you really expect they’ll be eager to help you set up manufacturing elsewhere? Is the plan to march into Pfizer and force its staff to redeploy to Costa Rica to build a new factory? Do the U.S. administration or activists care that this decision could take years to negotiate at the World Trade Organization, and will likely be litigated for years thereafter? Does it make sense to eliminate the incentive for private companies to invest in vaccine R&D or in the response to the next health emergency? And if the patent waiver is only temporary and building a factory takes months or years, will anyone bother to do so, even if they could?

No, none of it makes sense. Worse still, we could solve the policy problem more easily by harnessing market incentives for the global good by ponying up cash to vaccinate the entire world. No confiscation necessary.

The big problem is that countries have not bought enough vaccine to inoculate most of their populations. Covax, buying on behalf of 91 lower-income countries, is only collecting enough funding to cover 20% of their population. In many parts of the world, such as the Middle East, sub-Saharan Africa and some countries in Latin America, we see very low levels of vaccine prepurchasing. We have seen this week that the government of India had not ordered enough vaccine to cover its own population, for example, resulting in export bans on its domestic vaccine manufacturers; nor has it approved the Pfizer vaccine. Our collective focus instead must be to make the market: to set up advance purchase agreements to establish demand via country cooperation, Covax, and the multilateral development banks.