### 1NC – T

#### Interpretation: The aff must defend that member nations reduce intellectual property protections for all medicines

#### The upward entailment test and adverb test determine the genericity of a bare plural

Leslie and Lerner 16 [Sarah-Jane Leslie, Ph.D., Princeton, 2007. Dean of the Graduate School and Class of 1943 Professor of Philosophy. Served as the vice dean for faculty development in the Office of the Dean of the Faculty, director of the Program in Linguistics, and founding director of the Program in Cognitive Science at Princeton University. Adam Lerner, PhD Philosophy, Postgraduate Research Associate, Princeton 2018. From 2018, Assistant Professor/Faculty Fellow in the Center for Bioethics at New York University. Member of the [Princeton Social Neuroscience Lab](http://psnlab.princeton.edu/).] “Generic Generalizations.” Stanford Encyclopedia of Philosophy. April 24, 2016. <https://plato.stanford.edu/entries/generics/> TG

1. Generics and Logical Form

In English, generics can be expressed using a variety of syntactic forms: bare plurals (e.g., “tigers are striped”), indefinite singulars (e.g., “a tiger is striped”), and definite singulars (“the tiger is striped”). However, none of these syntactic forms is dedicated to expressing generic claims; each can also be used to express existential and/or specific claims. Further, some generics express what appear to be generalizations over individuals (e.g., “tigers are striped”), while others appear to predicate properties directly of the kind (e.g., “dodos are extinct”). These facts and others give rise to a number of questions concerning the logical forms of generic statements.

1.1 Isolating the Generic Interpretation

Consider the following pairs of sentences:

(1)a.Tigers are striped.

b.Tigers are on the front lawn.

(2)a.A tiger is striped.

b.A tiger is on the front lawn.

(3)a.The tiger is striped.

b.The tiger is on the front lawn.

The sentence pairs above are prima facie syntactically parallel—both are subject-predicate sentences whose subjects consist of the same common noun coupled with the same, or no, article. However, the interpretation of first sentence of each pair is intuitively quite different from the interpretation of the second sentence in the pair. In the second sentences, we are talking about some particular tigers: a group of tigers in ([1b](https://plato.stanford.edu/entries/generics/#ex1b)), some individual tiger in ([2b](https://plato.stanford.edu/entries/generics/#ex2b)), and some unique salient or familiar tiger in ([3b](https://plato.stanford.edu/entries/generics/#ex3b))—a beloved pet, perhaps. In the first sentences, however, we are saying something general. There is/are no particular tiger or tigers that we are talking about.

The second sentences of the pairs receive what is called an existential interpretation. The hallmark of the existential interpretation of a sentence containing a bare plural or an indefinite singular is that it may be paraphrased with “some” with little or no change in meaning; hence the terminology “existential reading”. The application of the term “existential interpretation” is perhaps less appropriate when applied to the definite singular, but it is intended there to cover interpretation of the definite singular as referring to a unique contextually salient/familiar particular individual, not to a kind.

There are some tests that are helpful in distinguishing these two readings. For example, the existential interpretation is upward entailing, meaning that the statement will always remain true if we replace the subject term with a more inclusive term. Consider our examples above. In ([1b](https://plato.stanford.edu/entries/generics/#ex1b)), we can replace “tiger” with “animal” salva veritate, but in ([1a](https://plato.stanford.edu/entries/generics/#ex1a)) we cannot. If “tigers are on the lawn” is true, then “animals are on the lawn” must be true. However, “tigers are striped” is true, yet “animals are striped” is false. ([1a](https://plato.stanford.edu/entries/generics/#ex1a)) does not entail that animals are striped, but ([1b](https://plato.stanford.edu/entries/generics/#ex1b)) entails that animals are on the front lawn (Lawler 1973; Laca 1990; Krifka et al. 1995).

Another test concerns whether we can insert an adverb of quantification with minimal change of meaning (Krifka et al. 1995). For example, inserting “usually” in the sentences in ([1a](https://plato.stanford.edu/entries/generics/#ex1a)) (e.g., “tigers are usually striped”) produces only a small change in meaning, while inserting “usually” in ([1b](https://plato.stanford.edu/entries/generics/#ex1b)) dramatically alters the meaning of the sentence (e.g., “tigers are usually on the front lawn”). (For generics such as “mosquitoes carry malaria”, the adverb “sometimes” is perhaps better used than “usually” to mark off the generic reading.)

#### It applies to “Medicines” – adding “generally” to the res doesn’t substantially change its meaning because the res never specified further

#### Vote negative:

#### 1] Precision – they justify arbitrarily mooting words in the resolution at their own whim in order to justify some potentially good interp.

#### Semantics outweighs:

#### [a] Lexical priority – it doesn’t matter if their interp if the debate is not pertinent i.e. it might me more educational for me to study for AP physics, outweighs since the topic constrains what pragmatics are relevant.

#### [b] Pragmatics are always subject to debate – empirically proven since there’s no consensus on whether NIBs are truly fair – but you can’t BS textual accuracy so semantics serves as an objective constraint on the aff.

#### 2] Limits and ground – their model allows affs to defend any medicine which explodes neg prep bc theres an infinite amount I can’t prepare for, like covid-19 vaccines, influenza, common colds, Marijuana, etc. and they all bracket out different DA’s

#### 3] TVA: Read a whole res aff with the same advantage

#### No RVIs – concede their reasons from disclosure – illogical and baiting.

### 1NC - CP

#### CP: France, Germany, Sweden, and Italy should:

* substantially increase COVID vaccine production to meet the global demand
* donate and distribute all necessary vaccines to the Republic of South Africa and the Republic of India.
* sign bilateral intellectual property licensing contracts with low and middle-income countries to share vaccines
* donate all necessary vaccines at no cost to low and middle-income nations unable to license intellectual property rights
* all member states will abide by WTO regulations and rulings

#### Global donations and increased domestic production solve

Yamey 21 [Gavin, Directs the Center for Policy Impact in Global Health at Duke University in Durham, North Carolina. “Rich Countries Should Tithe Their Vaccines” https://www.nature.com/articles/d41586-021-00470-9]

As I write this, 191 million vaccination shots against COVID-19 have been administered; more than three quarters were given in just 10 nations that account for 60% of the global gross domestic product. In some 130 nations with 2.5 billion people, not a single shot has been administered. High-income countries represent only 16% of the world’s population, but they have purchased more than half of all COVID-19 vaccine doses.

The US$4 billion that the White House pledged towards equitable vaccine distribution this month is a huge help in paying for doses for poorer nations. Reframing how vaccine deals are structured — and explained to the public in rich countries — could make this pledge even more powerful.

I live in the United States, so even though I am at low risk, I will be able to get vaccinated well ahead of many health workers and high-risk people in poorer nations.

This is unfair, and will prolong the pandemic. When SARS-CoV-2 transmission is wildly uncontrolled, the virus has more scope to evolve into dangerous variants. A COVID-19 outbreak anywhere could become an outbreak everywhere.

Why a pioneering plan to distribute COVID vaccines equitably must succeed

To help, rich countries should tithe their vaccine supply to poorer places and negotiate direct purchasing deals with vaccine manufacturers to increase supplies.

Many public-health workers strived to avoid the disparities we are seeing now. We knew that rich nations had hoarded vaccines during past outbreaks, such as the 2009 swine-flu pandemic. So, dozens of us working in global health tried — in long weekly Zoom calls for many months — to at least mitigate the hoarding and put a global sharing mechanism for COVID-19 vaccines in place. The result was COVID-19 Vaccines Global Access (COVAX) — co-led by Gavi, the Vaccine Alliance; the Coalition for Epidemic Preparedness Innovations; and the World Health Organization. It is a first-of-its-kind ‘buyers’ pool’ in which richer nations can collectively purchase vaccines, fund vaccine development and manufacturing and ensure that some of the supply will go to poorer countries.

Although around 190 nations have joined COVAX, about 3 dozen rich nations ended up buying most of their doses by way of direct deals with vaccine companies rather than through the COVAX pool. COVAX still expects to secure some 2 billion doses by the end of 2021, but richer countries have already bought 5.8 billion doses, often purchased before clinical trials were completed, through bilateral deals. COVAX is still getting pushed to the back of the queue.

What to do now? Richer nations should share their doses, stat. Perhaps for every nine doses they administer, they can donate one dose to COVAX. This falls far short of ‘equitable’, but it is within what is possible. This will help beyond dimming the chance of an outbreak from an imported variant that hoarded vaccines might have reduced efficacy against.

One analysis of vaccine nationalism (see go.nature.com/37wr), in which people in rich nations receive immediate vaccination and poorer nations are left behind for years, suggested that the global economy could lose US$9 trillion. Rich nations, whose exports would be suppressed, would bear half the cost. Disruption of global supply chains that provide parts for industry would continue.

COVID-19 vaccines: how to ensure Africa has access

Some nations are taking the lead. Norway is the first rich nation to have pledged to donate doses to the COVAX pool in parallel with vaccinating its citizens (the United Kingdom plans to donate superfluous doses after all its citizens have been vaccinated).

My colleagues and I used game theory to project what would happen if rich nations reconfigured their purchasing deals to increase the global vaccine supply (D. McAdams et al. BMJ Glob. Health 5, e003627; 2020). Currently, each vaccine purchase is a zero-sum game. But deals could include provisions that require vaccine makers to share knowledge and technology to boost production by other manufacturers. As a real-world example, the Serum Institute of India can manufacture the AstraZeneca–University of Oxford vaccine, providing doses for low- and middle-income countries.

An advanced purchase agreement might also finance risky investments that would speed up vaccine manufacturing. If one candidate fails in trials, the facility could be used for a different, successful vaccine, with a portion of the doses going to poorer countries. These deals create what economists call ‘positive spillovers’. With such collaboration, global vaccine distribution would no longer be a zero-sum game.

Some in rich countries might push back against sharing doses, arguing that a government needs to put its own citizens first and that no politician would risk giving doses away. But public polling in many of these nations shows that citizens want their governments to be more collaborative. A UK poll found that almost two-thirds of the public does not want rich countries to be prioritized for COVID-19 vaccination over poorer countries. And if the rich world continues to hoard vaccines, the global pandemic will drag on for perhaps as long as seven more years.

Another argument is that many poorer countries — such as Mongolia and Vietnam — have already curtailed their COVID-19 outbreaks using non-pharmaceutical interventions such as testing, contact tracing and mask-wearing. It is unfair to penalize nations that have used these measures by denying them vaccines. How will citizens respond to public-health advice in the next pandemic if they think it will deprive them of vaccine access?

It is in everybody’s interests to act collectively to boost vaccinations. It is self-defeating to act otherwise.

### 1NC – DA

#### Biotech R&D is set for high growth and investment now

NASDAQ 8/9 [NASDAQ is a stock market index that includes almost all stocks listed on the Nasdaq stock exchange. Along with the Dow Jones Industrial Average and S&P 500, it is one of the three most-followed stock market indices in the United States. This article was written by NASDAQ contributors and published on CNBC. The editorial staff of CNBC did not contribute to the creation of this study.) “Why the Nasdaq Biotechnology Index is poised for a run of sustainable growth” CNBC, NASDAQ, 8/9/2021, <https://www.cnbc.com/advertorial/2021/08/09/why-the-nasdaq-biotechnology-index-is-poised-for-a-run-of-sustainable-growth-.html>] RM

Between the recent bio innovation success stories in the battle against Covid-19 and the technology-driven advances ushering in new efficiencies for research and development (R&D), **the biotech industry has never been more relevant**.

As home to more than 265 companies, the pioneering Nasdaq Biotechnology Index (NBI) has long been committed to providing healthcare’s innovators with access to the capital they need to keep moving forward. Now, investors have access to the Index’s companies through a new ETF, the Invesco Nasdaq Biotechnology ETF (IBBQ).

Launched in 1993, in the wake of the original “biotech revolution” led by the discovery of recombinant DNA, NBI® remains the most representative index in the space. In fact, 98% of all U.S. listed biotech companies are listed on Nasdaq. When considering the massive growth taking place in the sector, it’s no surprise that NBI has outperformed both the S&P 500 (SPX) and Health Care Select Sector Index (IXVTR) in certain market environments.

According to Mark Marex, Index R&D Senior Specialist for Nasdaq who recently compiled an in-depth report on the NBI, global events and digital acceleration have contributed to the Index’s recent strong performance; and Nasdaq’s dedication to maintaining a true benchmark for technology-driven healthcare innovation has provided a framework for growth.

Building the ideal benchmark

Given the existence of pureplay biotech firms, hybrid biopharmaceutical companies, and less R&D-intensive pharmaceutical manufacturers, creating a single benchmark that truly captures the biotech sector and the symbiotic relationships among its players is no easy task.

One of the unique aspects of NBI, versus biotech-focused indexes created by other index providers, is its subsector classifications split between Biotechnology and Pharmaceuticals. As of June 30, 2021, ICB (FTSE Russell’s Industry Classification Benchmark) classified 222 NBI companies as Biotechnology and 47 as Pharmaceuticals. The resulting split by index weight is approximately 65% and 35%, respectively, which illustrates the major difference between the two groups: Pharmaceutical companies tend to be much larger than Biotechnology firms.

This split within a single index provides advantages for investors: While offering some exposure to more established pharmaceutical companies, it also includes R&D-heavy biotech firms that over time may transition into biotech-driven pharma companies. That’s exactly what happened this year when NBI’s largest company, Amgen (AMGN / $144Bn), was reclassified by ICB from Biotechnology to Pharmaceuticals. By retaining firms as they straddle the two classifications over the course of their lifecycle, NBI presents potential growth advantages when compared with index providers that focus rigidly on one classification versus the other.

Home to world-changing breakthroughs

Nasdaq’s vision for the Index has served it well, **both in terms of its longevity and its current role as a champion of the companies paving the way for a post-pandemic world through their technological advances and life-saving treatments**. The broad reach of NBI constituents across multiple fronts in the fight against Covid-19, for example — from diagnosis to vaccines and treatment —demonstrates the strength of its core approach.

NBI companies including Gilead and Regeneron made headlines for their successes during the pandemic with antiviral therapeutics and antibody-based therapeutics for high-risk patients. But it’s the stunning success of m-RNA vaccine technology from Moderna and BioNTech, two NBI companies, that most clearly showcase the home run potential among the biotech entrepreneurs in the space.

And while NBI is currently up 8.2% YTD on a price-return basis (as of June 30) **versus a broader market gain of 14.4% by SPX**, the S&P Biotechnology Select Industry Index (SPSIBI) is down 3.7%.

It’s worth noting that in 2020, NBI outperformed SPX with a price gain of 25.7% versus 16.3%, respectively. This shows the resilience of the NBI and the inherent strength of its current mix of companies.

The possibilities of accelerated R&D

As a whole, the life-changing work being done by NBI constituents requires enormous amounts of R&D. In 2020, R&D expenses for the entire group totaled $68.5Bn, nearly 31% of these companies’ revenue totals. Two-thirds of NBI’s firms reported R&D expenses that exceeded their revenues

For several NBI companies, however, these massive investments provided tangible benefits in the fight against Covid-19. Undoubtedly, years of back-end work and minimal profits ultimately helped deliver the very products that are now driving historic returns. Psychologically, their breakthroughs demonstrated the enormous potential of science and technology to serve humankind.

Looking ahead, **revolutions in Mapping and Engineering processes, boosted by rapid advancements in Machine Learning and Artificial Intelligence, are fostering a true fusion of Biology and Technology that could transform the traditionally costly and labor-intensive R&D function**. Some research estimates these advances could reduce the failure rate of drugs by up to 45% and shorten drug trials by up to 50%. The result could be even more breakthroughs, performed much more efficiently, greatly increasing the returns on biopharmaceutical R&D.

Even a conservative interpretation of the above numbers would significantly reduce R&D costs and boost the market capitalization of therapeutics companies from the current $2Tn up to $9Tn as soon as 2024, according to estimates from ARK Financial.

Meanwhile, increasingly cost-effective human genomics could revolutionize several other industries, from agriculture to biofuels.

By any measure, there is much to be excited about across the spectrum of biotech — especially coming out of a global pandemic. And while no person, nor index, can truly predict what the future holds, chances are strong that companies sitting within NBI will have a hand in leading the way.

“**For investors**, the Index already serves as a fascinating lens through which to view human society’s scientific and technological advancements,” says Mark Marex. “To me, it’s very exciting to ponder what the researchers, scientists, and business leaders in this space will accomplish next.”

#### IPR protections are key to sustain healthcare investments and manufacturing. Independently, it’s key to broader vaccine production.

Roberts 6/25/21 [James M. Roberts is a Research Fellow for Economic Freedom and Growth at the Heritage Foundation. Roberts' primary responsibility as one of The Heritage Foundation's lead experts in economic freedom and growth is to edit the Rule of Law and Monetary Freedom sections of [Index of Economic Freedom](https://www.heritage.org/index/). An influential annual analysis of the economic climate of countries throughout the world, the Index is co-published by Heritage and The Wall Street Journal.) “Biden’s OK of Global Theft of America’s Intellectual Property is Wrong, Dangerous.” 6/25/2021, The Heritage Foundation, Commentary—Public Health] RM

Last month, President Biden advocated removing international intellectual property rights (IPR) protections for American-made COVID-19 vaccines.

**Foreign companies may take the president’s policy as a green light to produce reverse-engineered, counterfeit substitutes**.

The best way to prevent and treat new diseases is to ensure that private American pharmaceutical companies continue their innovative research and vaccine production.

Three U.S. companies—Pfizer, Moderna, and Johnson & Johnson—created and manufactured the world’s most effective mRNA COVID vaccines in record time. An increasing majority of Americans have now been inoculated, but much of the developing world remains in desperate need of vaccines. Americans naturally want to help. The question is how.

Last month, President Biden advocated removing international intellectual property rights (IPR) protections for American-made COVID-19 vaccines. This, he said, would help make the vaccines more plentiful and available in needy countries. **It’s a short-sighted approach and doomed to fail.**

Mr. Biden wants to waive the World Trade Organization’s “Trade-Related Aspects of Intellectual Property Rights” (TRIPS) agreement for U.S. vaccines and let foreign countries issue “compulsory licenses“ allowing their domestic pharmaceutical companies to manufacture the medicines without adequately compensating the companies that invented them.

Practically speaking, countries such as India and South Africa are unlikely to manufacture the vaccines. They lack an advanced infrastructure for cold supply-chain distribution and many other crucial resources required by these products’ capital-intensive, state-of-the-art manufacturing process.

But the Biden policy is bad for many other reasons.

Developing breakthrough medications takes tremendous ingenuity and immense financial investments. **It’s an extraordinarily high-risk endeavor, and the prospect of making a profit is what convinces private companies to undertake those risks.**

Signaling that the United States will not fight to defend their intellectual property rights **actively undermines innovation and manufacturing** in American health care and medicines.

It also erodes patient protections by undermining quality control. Foreign companies may take the president’s policy as a green light to produce reverse-engineered, counterfeit substitutes. Already there are reports of ineffective and even dangerous counterfeit COVID-19 vaccines being sold around the world.

Those pushing to break U.S. pharmaceutical patents say they want to do so for altruistic reasons. Consequently, they also insist that the prices for the medications be set far below their actual value.

But history shows us that forcing private companies to provide vaccines at an “affordable price,” regardless of the cost to the companies, actually impedes the manufacture of high-quality vaccines. Moreover, it inhibits the **future development of vaccines** needed to meet as-yet-unknown diseases.

Washington first imposed vaccine price controls as part of Hillary Clinton’s 1993 healthcare-for-all crusade. As the Wall Street Journal later noted, it was a body blow to the U.S. vaccine industry. Ironically, government-decreed prices left the companies unable to produce enough vaccines to meet Mrs. Clinton’s admittedly admirable goal of universal immunization of children. Since then, U.S. firms have largely eschewed the vaccine market because they could not recoup their R&D and manufacturing costs and earn enough profit to fund future innovation.

Ultimately, **compulsory licensing legalizes the theft of intellectual property**. Recognizing this, senators from both sides of the aisle have joined with other government officials and industry leaders to call on the administration to reverse this bad decision.

The U.S. patent protection system has served the nation well since its founding.  **It is and has been a bulwark of American prosperity**, but the strength of that protection has been weakening in the past few decades. **Compulsory licensing contributes to the erosion** of that protection.

As the U.S. and the rest of the world emerge from the pandemic, it is clear that more innovative medicines and vaccines will be needed for future protection from viruses and other emerging biological threats.

**The best way to prevent and treat those new diseases is to ensure that private American pharmaceutical companies continue their innovative research and vaccine production**.

That way, U.S.-manufactured vaccines can be made available to all Americans quickly. And governments can subsidize their export and sale to other countries far more effectively and less expensively than through compulsory licensing schemes.

Meanwhile, let’s hope Mr. Biden listens to the more reasonable and less-agenda driven voices in this debate and reverses course on the TRIPS waiver.

#### COVID was a precursor to deadlier pandemics—vaccine production will determine everything.

Lander 8/4/21 [Eric Lander, President Biden’s Science Advisory and Director of the White House Office of Science and Technology Policy) “Opinion: As bad as Covid-19 has been, a future pandemic could be even worse—unless we act now” 8/4/21, The Washington Post] RM

[Coronavirus](https://www.washingtonpost.com/coronavirus/?itid=lk_inline_manual_3) vaccines can end the current pandemic if enough people choose to protect themselves and their loved ones by getting vaccinated. But in the years to come, we will still need to defend against a pandemic side effect: collective amnesia.

As public health emergencies recede, societies often quickly forget their experiences — and **fail to prepare for future challenges**. For pandemics, such a course would be disastrous.

**New infectious diseases have been emerging at an accelerating pace,** and they are spreading faster.

Our federal government is responsible for defending the United States against future threats. That’s why President Biden has asked Congress to fund his plan to build on current scientific progress to keep new infectious-disease threats from turning into pandemics like covid-19.

As the president’s science adviser, I know what’s becoming possible. For the first time in our history, we have an opportunity not just to refill our stockpiles but also to transform our capabilities. However, **if we don’t start preparing now for future pandemics, the window for action will close.**

Covid-19 has been a catastrophe: The toll in the United States alone is [more than 614,000 lives](https://www.washingtonpost.com/graphics/2020/national/coronavirus-us-cases-deaths/?itid=lk_inline_manual_11) and has been estimated to exceed [$16 trillion](https://jamanetwork.com/journals/jama/fullarticle/2771764), with disproportionate impact on vulnerable and marginalized communities.

But a future pandemic could be even worse — unless we take steps now.

It’s important to remember that the virus behind covid-19 is far less deadly than the 1918 influenza. The virus also belongs to a well-understood family, coronaviruses. It was possible to design vaccines within days of knowing the virus’s genetic code because 20 years of [basic scientific research](https://science.sciencemag.org/content/372/6538/109.full) had revealed which protein to target and how to stabilize it. And while the current virus spins off variants, its mutation rate is slower than that of most viruses.

**Unfortunately, most of the 26 families of viruses that infect humans are less well understood or harder to control**. We have a great deal of work still ahead.

The development of [mRNA vaccine technology](https://www.washingtonpost.com/health/2020/12/06/covid-vaccine-messenger-rna/?itid=lk_inline_manual_17) — thanks to more than a decade of foresighted basic research — was a game-changer. It shortened the time needed to design and test vaccines to less than a year — far faster than for any previous vaccine. And it’s been surprisingly effective against covid-19.

Still, there’s much more to do. We don’t yet know how mRNA vaccines will perform against other viruses down the road. And **when the next pandemic breaks out, we’ll want to be able to respond even faster.**

Fortunately, the scientific community has been developing a bold plan to keep future viruses from becoming pandemics.

Here are a few of the goals we should shoot for:

The capability to design, test and approve safe and effective vaccines within 100 days of detecting a pandemic threat (for covid-19, that would have meant May 2020); manufacture enough doses to supply the world within 200 days; and speed vaccination campaigns by replacing sterile injections with skin patches.

Diagnostics simple and cheap enough for daily home testing to limit spread and target medical care.

Early-warning systems to spot new biological threats anywhere in the world soon after they emerge and monitor them thereafter.

We desperately need to strengthen our public health system — from expanding the workforce to modernizing labs and data systems — including to ensure that vulnerable populations are protected.

And we need to coordinate actions with our international partners, because pandemics know no borders.

These goals are ambitious, but they’re feasible — provided the work is managed with the seriousness, focus and accountability of NASA’s Apollo Program, which sent humans to the moon.

Importantly, these capabilities won’t just prepare us for future pandemics; they’ll also improve public health and medical care for infectious diseases today.

Preparing for threats is a core national responsibility. That’s why our government invests heavily in missile defense and counterterrorism. We need to similarly protect the nation against biological threats, which range from the ongoing risk of pandemics to the possibility of deliberate use of bioweapons.

Pandemics cause massive death and disruption. From a financial standpoint, they’re also astronomically expensive. If, as might be expected from [history](https://www.cfr.org/timeline/major-epidemics-modern-era) and current trends, we suffered a pandemic of the current scale every two decades, the annualized cost would exceed $500 billion per year. Investing a much smaller amount to avert this toll is an economic and moral imperative.

The White House will put forward a detailed plan this month to ensure that the United States can fully prepare before the next outbreak. It’s hard to imagine a higher economic or human return on national investment.

#### Ecosystem sensitivity from climate change means future pandemics will cause extinction—assumes COVID

Supriya 4/19 [Lakshmi Supriya got her BSc in Industrial Chemistry from IIT Kharagpur (India) and a Ph.D. in Polymer Science and Engineering from Virginia Tech (USA). She has more than a decade of global industry experience working in the USA, Europe, and India. After her Ph.D., she worked as part of the R&D group in diverse industries starting with semiconductor packaging at Intel, Arizona, where she developed a new elastomeric thermal solution, which has now been commercialized and is used in the core i3 and i5 processors. From there she went on to work at two startups, one managing the microfluidics chip manufacturing lab at a biotechnology company and the other developing polymer formulations for oil extraction from oil sands. She also worked at Saint Gobain North America, developing various material solutions for photovoltaics and processing techniques and new applications for fluoropolymers. Most recently, she managed the Indian R&D team of Enthone (now part of MacDermid) developing electroplating technologies for precious metals.) “Humans versus viruses - Can we avoid extinction in near future?” News Medical Life Sciences, 4/19/21, https://www.news-medical.net/news/20210419/Humans-versus-viruses-Can-we-avoid-extinction-in-near-future.aspx] RM

Expert argues that human-caused changes to the environment can lead to the emergence of pathogens, not only from outside but also from our own microbiome, which can pave the way for large-scale destruction of humans and **even our extinction**.

Whenever there is a change in any system, it will cause other changes to reach a balance or equilibrium, generally at a point different from the original balance. Although this principle was originally posited by the French chemist Henry Le Chatelier for chemical reactions, this theory can be applied to almost anything else.

In an essay published on the online server Preprints\*, Eleftherios P. Diamandis of the University of Toronto and the Mount Sinai Hospital, Toronto, argues that changes caused by humans, to the climate, and everything around us will lead to changes that may have a dramatic impact on human life. Because our ecosystems are so complex, we don’t know how our actions will affect us in the long run, so humans generally disregard them.

Changing our environment

Everything around us is changing, from living organisms to the climate, water, and soil. Some estimates say about half the organisms that existed 50 years ago have already become extinct, and about 80% of the species may become extinct in the future.

As the debate on global warming continues, according to data, the last six years have been the warmest on record. Global warming is melting ice, and sea levels have been increasing. The changing climate is causing more and more wildfires, which are leading to other related damage. At the same time, increased flooding is causing large-scale devastation.

One question that arises is how much environmental damage have humans already done? A recent study compared the natural biomass on Earth to the mass produced by humans and found humans produce a mass equal to their weight every week. This human-made mass is mainly for buildings, roads, and plastic products.

In the early 1900s, human-made mass was about 3% of the global biomass. Today both are about equal. Projections say by 2040, the human-made mass will be triple that of Earth’s biomass. But, slowing down human activity that causes such production may be difficult, given it is considered part of our growth as a civilization.

Emerging pathogens

Although we are made up of human cells, we have almost ten times that of bacteria just in our guts and more on our skin. These microbes not only affect locally but also affect the entire body. There is a balance between the good and bad bacteria, and any change in the environment may cause this balance to shift, especially on the skin, the consequences of which are unknown.

Although most bacteria on and inside of us are harmless, gut bacteria can also have viruses. If viruses don’t kill the bacteria immediately, they can incorporate into the bacterial genome and stay latent for a long time until reactivation by environmental factors, when they can become pathogenic. They can also escape from the gut and enter other organs or the bloodstream. Bacteria can then use these viruses to kill other bacteria or help them evolve to more virulent strains.

An example of the evolution of pathogens is the cause of the current pandemic, the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Several mutations are now known that make the virus more infectious and resistant to immune responses, and strengthening its to enter cells via surface receptors.

The brain

There is evidence that the SARS-CoV-2 can also affect the brain. The virus may enter the brain via the olfactory tract or through the angiotensin-converting enzyme 2 (ACE2) pathway. Viruses can also affect our senses, such as a loss of smell and taste, and there could be other so far unkown neurological effects. The loss of smell seen in COVID-19 could be a new viral syndrome specific to this disease.

Many books and movies have described pandemics caused by pathogens that wipe out large populations and cause severe diseases. In the essay, the author provides a hypothetical scenario where a gut bacteria suddenly starts producing viral proteins. Some virions spread through the body and get transmitted through the human population. After a few months, the virus started causing blindness, and within a year, large populations lost their vision.

Pandemics can cause other diseases that can threaten humanity’s entire existence. **The COVID-19 pandemic brought this possibility to the forefront**. If we continue disturbing the equilibrium between us and the environment, we don’t know what the consequences may be and **the next pandemic could lead us to extinction.**

### 1NC – Case

#### Helps China and Russia instead, and it causes manufacturing uncertainty, and can never be an advantage in Africa – resources and skills.

Nwuke 19 [Kasirim Nwuke: Economist with more than 25 years of experience at the national and international levels. He works and writes on economics, science, technology and innovation, and society with special focus on the digital economy. May 19, 2020. “Africa should not support suspension of intellectual property rights protection for Covid-19” <https://www.theafricareport.com/89489/africa-should-not-support-suspension-of-intellectual-property-rights-protection-for-covid-19/> Accessed 8/25 //gord0]

In October 2020, South Africa and India, two powerhouses of generic pharmaceuticals manufacturing in the developing world, made a very broad proposal calling on members of the WTO, to suspend, for a limited time, intellectual property protection for patents, copyrights, industrial designs, and undisclosed information in relation to “the prevention, containment, or treatment of Covid-19 until widespread vaccination is in place globally, and the majority of the world’s population has developed immunity.”

The suspension proposal is driven by the fear that **developing countries will bear the brunt of the pandemic** and will be devastated by it if they do not have rapid access to affordable Covid-19 vaccines, diagnostics and treatment.

The proposal, if approved, will allow pharmaceutical manufactures in developing countries to manufacture Covid-19 products and technologies free of any fears of legal challenges for patent infringement.

This could result in greater availability of the technologies and products, better affordability worldwide, higher rates of vaccination and lower fatalities not just in the developed world but also in the developing world.

However, Big Pharma and many business groups argue that approving the proposal will have an **adverse impact on research, development and innovation.** There is also the fear that the waiver, if granted, will give China and Russia unimpeded access to advanced western pharmaceutical technologies, and consequently, **erode the West’s competitive advantage** in this area.

Most African countries support it. President Biden as candidate Biden had said on the campaign trail that he would support the suspension proposal were he elected president. The EU is divided, with **Germany firmly opposed and France now in support.** Russia has come out in support of the proposal. Vaccine nationalism in some countries, the appalling situation in India, the gradually rising headcount in many other developing counties, and low numbers of vaccinated in poor countries have gained the proposal additional supporters.

But a waiver could make things worse for Africa…

First, a waiver will introduce unnecessary uncertainty in the vaccine manufacturing process. Incumbent manufacturers (Pfizer/BioNtech, Moderna, J&J, AstraZeneca) may cut back on planned production of vaccines in response to the waiver because of uncertainty over the quantity that generic manufacturers may produce and the pricing of the new generics.

This will make it more difficult for African countries, until the generics come on the market, to procure vaccines and Covid-19 therapeutics. A waiver will be no victory for African countries as they do not have the capacities (skills, expertise, plants) to take advantage of it. Skills and capacities cannot be developed overnight. African countries should not waste precious resources asking for what they cannot use if granted.

The waiver will have the perverse effect of reinforcing Africa’s humiliating dependence on others to solve her problems. The continent has to deal with the dependency syndrome and begin to take the lead in tackling some of her challenges. The rest of the world must try to wean Africa off long-term dependency.

What African countries should do

Africa, more than any other continent, needs Big Pharma to **continue to invest in research** to develop new vaccines and cures for the many diseases that kill Africans. If Big pharma cuts back on R&D on Africa’s many diseases (and there is at the moment very little of that), many more Africans will die, not from Covid-19 but from other diseases. The situation in India and the gradually rising weekly headcount in a number of African countries is the consequence of the irresponsibility of political leaders and governments, a disease (political irresponsibility) that a waiver will not cure.

**A waiver could lead to lots of counterfeit vaccines** on the African market and given the weak food and drug regulatory capacity of African countries, this could be very dangerous not just for Africa but for the rest of the world. These counterfeit Covid-19 vaccines and treatments could present a greater public health risk to Africans than SARS-CoV-2 itself.

Bottom of Form

African countries should implement the Pharmaceuticals Manufacturing Plan for Africa; they should provide incentives for Big Pharma to set up branches in Africa; they should produce required skills by reforming their higher education sector.

In the long run, it is my view that African countries stand to lose if the South Africa-India proposal is approved by WTO members. For the reasons given above, **it is not in the self-interest of African countries to support it.** This is not the time for the usual herd “solidarity with one of our own.”

The main beneficiaries of any waiver will be China, India, and Russia, not poor African countries. Africa needs Big Pharma to remain innovative. The South Africa-India proposal will not help in this regard; it is an unnecessary distraction and should fail.

#### Vaccine IP is insufficient for imitation; originators will challenge with intense litigation, and nations don’t have necessary ingredients and materials. Independently, the plan will cause companies to disengage from global efforts.

Silverman 3/15 [Rachel Silverman is a policy fellow at the Center for Global Development where she leads policy-oriented research on global health financing and incentive structures. Silverman’s current research focuses on the practical application of results-based financing; global health transitions; efficient global health procurement; innovation models for global health; priority-setting for UHC; alignment and impact in international funding for family planning; and strategies to strengthen evidence and accountability. BA with distinction in international relations and economics from Stanford University.) “Waiving vaccine patents won’t help inoculate poorer nations” Washington Post, PostEverything Perspective, <https://www.washingtonpost.com/outlook/2021/03/15/vaccine-coronavirus-patents-waive-global-equity/>] RM

According to some activists, the solution to this inequity is relatively simple: By suspending protections on covid-19 vaccine patents, the international community “could help break Big Pharma monopolies and increase supplies so there are enough doses for everyone, everywhere,” [claims](https://peoplesvaccine.org/take-action/)the People’s Vaccine Alliance. Indeed, 58 low- and middle-income countries have mobilized in support of a proposed World Trade Organization [waiver](https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/IP/C/W669.pdf&Open=True) that would temporarily exempt [coronavirus](https://www.washingtonpost.com/coronavirus/?itid=lk_inline_manual_4)-related intellectual property from normal international rules and protections. And while the effort to waive IP protections has been a global health hot topic for months, it gained a high-profile endorsement in the United States recently from Sen. Bernie Sanders (I-Vt.). In a March 10 video statement, Sanders [called upon President Biden](https://twitter.com/GlobalJusticeUK/status/1369734275818549252?s=20) to support the IP suspension while slamming “huge, multibillion-dollar pharmaceutical companies [that] continue to prioritize profits by protecting their monopolies.”

The logic of the argument seems clear and intuitive — at first. Without patents, which serve narrow commercial interests, companies all over the world could freely produce the vaccine. Sure, Big Pharma would lose money — but this is a pandemic, and human life comes before private profit, especially when vaccines receive substantial public financing to support research and development. As with HIV drugs in years past, widespread generic production would dramatically increase supply and drive down prices to levels affordable even in the developing world.

Reality is more complicated, however. Because of the technical complexity of manufacturing coronavirus vaccines, waiving intellectual-property rights, by itself, would have little effect**.** **It could even backfire, with companies using the move as an excuse to disengage from global access efforts**. **There are more effective ways to entice — and to pressure — companies to license and share their intellectual property and the associated know-how, without broadly nullifying patents.**

The Moderna vaccine illustrates the limits of freeing up intellectual property. Moderna [announced in October](https://investors.modernatx.com/news-releases/news-release-details/statement-moderna-intellectual-property-matters-during-covid-19) that it would not enforce IP rights on its coronavirus vaccine — and yet it has taken no steps to share information about the vaccine’s design or manufacture, citing commercial interests in the underlying technology. Five months later, production of the Moderna vaccine remains entirely under the company’s direct control within its owned and contracted facilities. Notably, Moderna is also the only manufacturer of a U.S.- or British-approved vaccine [not yet participating in Covax](https://www.washingtonpost.com/world/coronavirus-vaccine-access-poor-countries-moderna/2021/02/12/0586e532-6712-11eb-bf81-c618c88ed605_story.html?itid=lk_inline_manual_9), a global-aid-funded effort (including a [pledged $4 billion from the United States](https://www.npr.org/2021/02/18/969145224/biden-to-announce-4-billion-for-global-covid-19-vaccine-effort)) to purchase vaccines for use in low- and middle-income countries.

It is true, however, that activist pressure — including threats to infringe upon IP rights — can encourage originators to enter into voluntary licensing arrangements. So the global movement to liberate the vaccine patents may be useful, even if some advocates make exaggerated claims about the effects of waivers on their own.

One reason patent waivers are unlikely to help much in this case is that vaccines are harder to make than ordinary drugs. Because most drugs are simple chemical compounds, and because the composition of the compounds is easily analyzable, competent chemists can usually reverse-engineer a production process with relative ease. When a drug patent expires, therefore — or is waived — generic companies can readily enter the market and produce competitive products, [lowering prices dramatically](https://www.fda.gov/about-fda/center-drug-evaluation-and-research-cder/generic-competition-and-drug-prices).

Vaccines, in contrast, are complex biological products. Observing their contents is insufficient to allow for imitation. **Instead, to produce the vaccine, manufacturers need access to the developer’s “soft” IP — the proprietary recipe, cell lines, manufacturing processes and so forth**. While some of this information is confidentially submitted to regulators and might theoretically be released in an extraordinary situation (though not without legal challenge), manufacturers are at an enormous disadvantage without the originator’s cooperation to help them set up their process and kick-start production. Even with the nonconsensual release of the soft IP held by the regulator, the process of trial and error would cause long delays in a best-case scenario. Most likely, the effort would end in expensive failure. Manufacturers also need certain raw ingredients and other materials, like glass vials and filtration equipment; overwhelming demand, paired with disruptive export restrictions, has constricted the global availability of some of these items.

#### Squo disproves – Moderna, J&J, AstroZeneca already in compulsory licensing agreements with South Africa, Brazil, Argentina, etc…

#### Underinvestment and regulation drive vaccine inefficiency---licenses are already available

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For the last year and a half I have been shouting from the rooftops, “invest in capacity, build more factories, shore up the supply lines, spend billions to save trillions.” Fortunately, some boffins in the Biden administration have found a better way, “the US supports the waiver of IP protections on COVID-19 vaccines to help end the pandemic.”

Waive IP protections. So simple. Why didn’t I think of that???

**Patents are not the problem**. All of the vaccine manufacturers are trying to increase supply as quickly as possible. Billions of doses are being produced–more than ever before in the history of the world. Licenses are widely available. **AstraZeneca have licensed their vaccine for production with manufactures around the world, including in India, Brazil, Mexico, Argentina, China and South Africa**. J&J’s vaccine has been licensed for production by multiple firms in the United States as well as with firms in Spain, South Africa and France. Sputnik has been licensed for production by firms in India, China, South Korea, Brazil and pending EMA approval with firms in Germany and France. Sinopharm has been licensed in the UAE, Egypt and Bangladesh. Novavax has licensed its vaccine for production in South Korea, India, and Japan and it is desperate to find other licensees but t**echnology transfer isn’t easy and there are limited supplies of raw materials:**

Virtually overnight, [Novavax] set up a network of outside manufacturers more ambitious than one outside executive said he’s ever seen, but they struggled at times to transfer their technology there amid pandemic travel restrictions. They were kicked out of one factory by the same government that’s bankrolled their effort. Competing with larger competitors, they’ve found themselves short on raw materials as diverse as Chilean tree bark and bioreactor bags. They signed a deal with India’s Serum Institute to produce many of their COVAX doses but now face the realistic chance that even when Serum gets to full capacity — and they are behind — India’s government, dealing with the world’s worst active outbreak, won’t let the shots leave the country.

Plastic bags are a bigger bottleneck than patents. The US embargo on vaccine supplies to India was precisely that the Biden administration used the DPA to prioritize things like bioreactor bags and filters to US suppliers and that meant that India’s Serum Institute was having trouble getting its production lines ready for Novavax. CureVac, another potential mRNA vaccine, is also finding it difficult to find supplies due to US restrictions (which means supplies are short everywhere). As Derek Lowe said:

Abolishing patents will not provide more shaker bags or more Chilean tree bark, nor provide more of the key filtration materials needed for production. These processes have a lot of potential choke points and rate-limiting steps in them, and there is no wand that will wave that complexity away.

Technology transfer has been difficult for AstraZeneca–which is one reason they have had production difficulties–and their vaccine uses relatively well understood technology. The mRNA technology is new and has never before been used to produce at scale. Pfizer and Moderna had to build factories and distribution systems from scratch. There are no mRNA factories idling on the sidelines. If there were, Moderna or Pfizer would be happy to license since they are producing in their own factories 24 hours a day, seven days a week (monopolies restrict supply, remember?). **Why do you think China hasn’t yet produced an mRNA vaccine? Hint: it isn’t fear about violating IP**. Moreover, even Moderna and Pfizer don’t yet fully understand their production technology, they are learning by doing every single day. **Moderna has said that they won’t enforce their patents during the pandemic but no one has stepped up to produce because no one else can.**

The US trade representative’s announcement is virtue signaling to the anti-market left and will do little to nothing to increase supply.

What can we do to increase supply? Sorry, there is no quick and cheap solution. We must spend. Trump’s Operation Warp Speed spent on the order of $15 billion. If we want more, we need to spend more and on similar scale. The Biden administration paid $269 million to Merck to retool its factories to make the J&J vaccine. That was a good start. We could also offer Pfizer and Moderna say $100 a dose to produce in excess of their current production and maybe with those resources there is more they could do. South Africa and India and every other country in the world should offer the same (India hasn’t even approved the Pfizer vaccine and they are complaining about IP!??) We should ease up on the DPA and invest more in the supply chain–let’s get CureVac and the Serum Institute what they need. We should work like hell to find a substitute for Chilean tree bark. See my piece in Science co-authored with Michael Kremer et. al. for more ideas. (Note also that these ideas are better at dealing with current supply constraints and they also increase the incentive to produce future vaccines, unlike shortsighted patent abrogation.)

Bottom line is that producing more takes real resources not waving magic patent wands.

You may have gathered that I am angry. I am indeed angry that the people in power think they can solve real problems on the cheap and at someone else’s expense. This is not serious. I am also angry that they are sending the wrong message about business, profits and capitalism. So let me end on positive note. Like the Apollo program and Dunkirk, the creation of the mRNA vaccines by Pfizer and Moderna should be lauded with Nobel prizes and major movies. Churchill called the rescue at Dunkirk a “miracle of deliverance,” well the miracle of Moderna will rescue many more. Not only was a vaccine designed in under a year, an entirely new production process was set up to produce billions of doses to rescue the world. The creation of the mRNA vaccines was a triumph of science, logistics, and management and it was done at a speed that I had thought possible only for past generations.

#### Waiving IP enforcement results in rampant increase in counterfeit vaccines – turns case.

Mercurio 21 (Bryan Mercurio is a Professor and Vice-Chancellor's Outstanding Fellow of the Faculty of Law at the Chinese University of Hong Kong, February 21, 2021, <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3789820&download=yes>) CS

6. IP enforcement is of vital importance to maintaining safety standards.

The protection of IP not only provides incentives to innovators to create, but also plays a crucial role in ensuring the safety of vaccines and helping to prevent the importation **of fraudulent and dangerous goods**. Unlike the typical pharmaceutical industry, the vaccine market is not a free and open market.69 Vaccines contain biological products made from living organisms and the risk of failure in vaccine development and production is high. 70 Moreover, the manufacturing process for vaccines is much more complex as it requires the use of facilities and equipment with a high degree of specialization.71 The complexity of vaccine products implies that more time and regulatory requirements are needed in order to make or “copy” the vaccine production process. Therefore, the innovator should be expected to make conscious and meticulous decisions as to when and to whom to issue licences, as this is the most responsible way to bring their technologies to the world and safeguard global health.

In addition, as the COVID-19 pandemic continues there has been a **noticeable increase in the circulation of fake medicines** around the world. According to the International Criminal Police Organization (Interpol), **organized crime groups** have been producing fake drugs and medical products and selling them for **lucrative profits in developing countries**.72 With the development of COVID-19 vaccines on the market, a rapid rise in the illegal sale of fake items is expected, according to the United Nations Office on Drugs and Crime (UNODC).73 Counterfeits of the legitimate products provide false promises of protection and could lead to **disastrous consequences**, including **worsened illness and** **death** for the individual and the retardation of herd immunity for the population at large. Effective and proactive **IP** procurement is **essential** and useful in mitigating the risks of counterfeit and substandard medicines. IP enforcement measures play a significant role in preventing these fake and illicit medicines from circulating in the market. While important during normal times, IP enforcement can take on an enhanced role of safeguarding the public during this critical period of time. Waiving all COVID-19 related IPRs raises the risk of unsafe or fake vaccines circulating in supply channels and being sold to unsuspecting governments, **putting millions of human lives at risk** and reducing trust in vaccines.

#### IPR hasn’t harmed access – manufacturing capacity alt cause

Mercurio 2/12 (Bryan Mercurio, [Simon F.S. Li Professor of Law at the Chinese University of Hong Kong (CUHK), having served as Associate Dean (Research) from 2010-14 and again from 2017-19. Professor Mercurio specialises in international economic law (IEL), with particular expertise in the intersection between trade law and intellectual property rights, free trade agreements, trade in services, dispute settlement and increasingly international investment law.], 2-12-2021, “WTO Waiver from Intellectual Property Protection for COVID-19 Vaccines and Treatments: A Critical Review“, No Publication, accessed: 8-8-2021, https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3789820) ajs

2. Intellectual property rights have not hampered access to COVID-19 vaccines

A WTO waiver is an extreme measure which should only be used when existing WTO obligations prove inadequate. This was the case in relation to the compulsory licencing provisions under Article 31 of the TRIPS Agreement, which essentially precluded Members with no or inadequate manufacturing capabilities from making use of the flexibility granted in the TRIPS Agreement. 25 This was also the case with the Kimberley Process, which attempts to eliminate trade in “conflict diamonds”. 26

Although the IP waiver proposal states that “there are several reports about intellectual property rights hindering or potentially hindering timely provisioning of affordable medical products to the patients”, 27 the sponsors did not provide further elaboration or evidence to support their declaration that “many countries especially developing countries may face institutional and legal difficulties when using flexibilities available [under the TRIPS Agreement]”. 28 Instead, many of the examples used by India and South Africa point to problems not with the TRIPS Agreement but rather to failures at the domestic level. As mentioned above, the WTO allowed for the importation of medicines under a compulsory licence in 2003, and yet many developing countries have yet to put in place any framework to allow their country to make use of the flexibility. 29 This is not an institutional problem of the international system but rather a problem at the country level.

Two additional factors which make the proposed waiver unnecessary and potentially harmful. First, pharmaceutical companies are selling the vaccine at extremely reasonable rates and several announced plans for extensive not-for-profit sales.30 Although agreements between the pharmaceutical companies and governments are not publicly disclosed, the Belgian Secretary of State Eva De Bleeker temporarily made publicly available in a tweet the prices the EU is being charged by each manufacturer. The De Bleeker tweet indicated the European Commission negotiated price arrangements with six companies, with the range of spending between €1.78 and €18 per coronavirus vaccine dosage. Specific price per dose listed for each of the six vaccines was as follows: Oxford/AstraZeneca: (€1.78), Johnson & Johnson (€8.50), Sanofi/GSK (€7.56), CureVac (€10), BioNTech/Pfizer (€12) and Moderna (€18).31

While much as been made of the fact that South Africa agreed to purchase 1.5 million doses of the Oxford/AstraZeneca from the Serum Institute of India (SII) at a cost of €4.321 per dose,32 these criticisms are directed at the lack of transparency in pharmaceutical licenses and production contracts – an issue which would be wholly unaddressed by a waiver of IPRs.

Moreover, while the disparity in pricing is concerning the overall per dosage rate South Africa is paying nevertheless represents value for money given the expected health and economic returns on investment. Despite the disparity in pricing between nations, the larger point remains that the industry has not only rapidly produced vaccines for the novel coronavirus but is making them available at unquestionably reasonable prices.

Second, the proposed waiver will do nothing to address the problem of lack of capacity or the transfer of technology and goodwill. Pharmaceutical companies have not applied for patents in the majority of developing countries – in such countries, any manufacturer is free to produce and market the vaccine inside the territory of that country or to export the vaccine to other countries where patents have not been filed.33 Patents cannot be the problem in the countries where no patent applications have been filed, but the lack of production in such countries points to the real problem – these countries lack manufacturing capacity and capability.

While advanced pharmaceutical companies will have the technology, know-how and readiness to manufacture, store and transport complex vaccine formulations, such factories and logistics exist in only a handful of countries.34 Regardless of whether an IP waiver is granted, the remaining countries will be left without enhanced vaccine access and still reliant on imported supplies. With prices for the vaccine already very low, it is doubtful that generic suppliers will be able to provide the vaccine at significantly lower prices. Under such a scenario, the benefit of the waiver would go not to the countries in need but to the generic supplier who would not need to pay the licence fee or royalty to the innovator. Thus, the waiver would simply serve to benefit advanced generic manufacturers, most of which are located in a handful of countries, including China and Brazil as well as (unsurprisingly) India and South Africa. Countries would perhaps be better off obtaining the vaccine from suppliers that have negotiated a voluntary licence from the patent holder, as such licences include provisions for the transfer of technology, know-how and ongoing quality assurance support.

#### Waivers fail – license agreements are key to access and scaling up vaccines

Crosby et al 21 [[Daniel Crosby](https://www.jdsupra.com/authors/daniel-crosby/), [Evan Diamond](https://www.jdsupra.com/authors/evan-diamond/), [Isabel Fernandez de la Cuesta](https://www.jdsupra.com/authors/isabel-fernandez-de-la-cuesta/), [Jamieson Greer](https://www.jdsupra.com/authors/jamieson-greer/), [Jeffrey Telep](https://www.jdsupra.com/authors/jeffrey-telep/), [Brian White](https://www.jdsupra.com/authors/brian-white/)] “Group of Nearly 60 WTO Members Seek Unprecedented Waiver from WTO Intellectual Property Protection for COVID-related Medical Products,” JD Supra, March 5, 2021, <https://www.jdsupra.com/legalnews/group-of-nearly-60-wto-members-seek-2523821/> TG

Waiver risks uncontrolled use of patented technologies, without improving vaccine access. Pharmaceutical companies can provide, and have provided, licenses to distribute or scale-up production of COVID-19 vaccines and therapies at reduced cost. Such license agreements allow for expanded access in low- and middle-income countries, while also setting reasonable parameters so that patents and other IP rights are used to address the specific medical needs of the COVID-19 pandemic at hand, and not for other purposes. License agreements also allow for orderly technology transfer, including of unpatented “trade secret” information and other critical “know-how,” that may be essential to efficiently producing and scaling-up safe and effective versions of technologically complex vaccines and biologic drug products.

Under the present TRIPS waiver proposal, however, member countries could try to exploit an extraordinarily broad scope of IP and copy patented technologies so long as they are “in relation to prevention, containment or treatment of COVID-19.” For example, under an expansive reading of the proposed waiver language, a member country could try to produce patented pharmaceutical compounds that have other indicated uses predating COVID-19, if such compounds had later been studied or experimentally used for potential symptomatic relief or antiviral activity in COVID-19 patients. The same risks may be faced by manufacturers of patented materials or devices that have multiple uses predating COVID-19, but also may be used as “personal protective equipment” or components thereof, or in other measures arguably relating to COVID-19 “prevention” or “containment.”

At the same time, it is unclear how the proposed TRIPS waiver could provide the technology transfer and know-how critical for making the complex molecules and formulations constituting the various COVID-19 vaccines. Vaccine manufacture undertaken by an unauthorized party without the proper processes and controls could result in a different product that is potentially ineffective or results in unwanted health consequences. And even if an unauthorized manufacturer could overcome those substantial hurdles to reverse-engineer and scale up a safe and effective vaccine copy, it would likely take substantial time and a series of failures to do so. Notably, several of the original COVID-19 vaccine developers have recently faced low product yield and other manufacturing challenges during pre-commercial scale-up efforts and the initial months of commercial production.

#### Multilateral trade weakens ties between proximate countries – causes conflicts to escalate

Thoma- Economics Prof, U of Oregon- 2007 Mark, Trade Liberalization and War, July, <http://economistsview.typepad.com/economistsview/2007/07/trade-liberaliz.html>

Globalisation is by construction an increase in both bilateral and multilateral trade flows. What then was the net effect of increased trade since 1970? We find that it generated an increase in the probability of a bilateral conflict by around 20% for those countries separated by less than 1000kms, the group of countries for which the risk of disputes that can escalate militarily is the highest. The effects are much smaller for countries which are more distant. Contrary to what these results (aggravated by our nationality) may suggest, we are not anti-globalisation activists even though we are aware that some implications of our work could be (mis)used in such a way. The result that bilateral trade is pacifying brings several more optimistic implications on globalisation. First, if we think of a world war as a war between two large groups or coalitions of countries, then globalisation makes such a war less likely because it increases the opportunity cost of such a conflict. Obviously, this conclusion cannot be tested but is a logical implication of our results. From this point of view, our work suggests that globalisation may be at the origin of a change in the nature of conflicts, less global and more local. Second, our results do confirm that increased trade flows created by regional trade agreements (such as the EU) are indeed pacifying as intended. Given that most military conflicts are local, because they find their origins in border or ethnic disputes, this is not a small achievement. These beneficial political aspects of regional trade agreements are not usually considered by economists who often focus on the economic distortions brought by their discriminatory nature. Given the huge human and economic costs of wars, this political effect of regional trade agreements should not be discounted. This opens interesting questions on how far these regional trade agreements should extend – a topical issue in the case of the EU. The entry of Turkey in the EU would indeed pacify its relations with EU countries (especially Greece and Cyprus), but also increase the probability of a conflict between Turkey and its non-EU neighbours. However, our simulations suggest that in this case, the first effect dominates the second by a large margin. More generally, our results should be interpreted as a word of caution on some political aspects of globalisation. As it proceeds and weakens the economic ties of proximate countries, those with the highest risk of disputes that can escalate into military conflicts, local conflicts may become more prevalent. Even if they may not appear optimal on purely economic grounds, regional and bilateral trade agreements, by strengthening local economic ties, may therefore be a necessary political counterbalance to economic globalisation.

#### Increases propensity for conflict – war chest

Awad 13 (Emiel Awad, From his Master Thesis in International Public Management and Public Policy from Erasmus University, “Economic Interdependence, Trade, and War: A Theoretical and Empirical Analysis” 2013, https://thesis.eur.nl/pub/15372/)

According to neorealists, trade and economic interdependence lead to war.15 The main thesis of the neorealists is portrayed by the following quote of Kenneth Waltz: “(...) close interdependence means closeness of contact and raises the prospect of occasional conflict. (...) Interdependent states whose relations remain unregulated must experience conflict and will occasionally fall into violence. If interdependence grows at a pace that exceeds the development of central control, then interdependence hastens the occasion for war.”16 States thus avoid becoming economically dependent, as such dependency results in great risks. Especially the last sentence of the quote above shows the central point of neorealism. If interdependence grows beyond a state’s control, then the likelihood of war increases, as when interdependence grows too swiftly, a state’s future is at stake. This is especially costly for states, as they ultimately care about their survival according to Waltz: Because states are in a self-help system, they try to avoid becoming dependent on others for vital goods and services.17 13Keohane and Nye, 1977, pp. 10-13 14Katzenstein et al., 1998, p. 684 15The classical realist position is that economic interdependence is part of low politics and therefore does not matter for a state’s decision-making. We will primarily focus on the neorealist position however. 16Waltz, 1979, p. 138 17Ibid., p. 155. Similarly, Waltz (p. 107) argues that states do not voluntarily put themselves in a dependent situation, and he argues that the issue of security subordinates economic (i.e. welfare maximizing) to political interest. 8 3.4 The Realist Thesis 3 THEORETICAL FRAMEWORK The goal of survival must precede any other goal. Economic welfare has no importance when the threat of extinction is present. Because of this, economic interdependence is not as important as military goals.18 When those vital goods and services are no longer secure, a state faces great difficulties in surviving, hence such a situation must be prevented. 3.4.1 The Desire for Autarky Neorealists thus point to the fact that economic interdependence brings great costs to a state. In an increasingly interdependent system, states increasingly lose autonomy over their territory. Additionally, they depend on access to foreign markets and on foreign sources of raw materials. Due to the fact that economic ties are closely knit, financial crises and other problems in other countries have a greater impact on the own country.19 In addition, economic interdependence means that a state depends on another state. This is very costly, because this means that at any point in time, the future of a state is in the hands of another state. Trade can then be used as a means to coerce a state when interdependence is high. As neorealists posit that the ultimate goal of states is survival, dependency should be avoided at all costs. For this reason, Waltz proposes that economic interdependence increases the likelihood of war. First, states wish to avoid dependency (in other words, they prefer autarky over dependency),20 therefore interdependent relationships are more likely to erupt into conflicts than independent relationships. Therefore, when a state has to decide which target he wishes to attack to obtain a given territory, he will choose a state which he depends on strongly. State A has less reason to attack state B if economic dependence is low, as even in the case that the war is won and the territory is captured, autarky is still not reached. It is therefore better to try to capture a territory that state A depends on strongly, as the capture of the territory would lead to an autarkic position. Only in that case is dependency avoided, and the desire for territorial expansion reduced.21 3.4.2 Relative Gains and the Negative Security Externality Although realists acknowledge that free trade brings benefits which may be lost after the cessation of trade, they point to the great importance of relative gains and losses in a state’s decision-making. Due to the importance of balancing in order to survive, it may be rational to decline cooperation, even if it brings absolute benefits.22 Relative power determines whether survival is secured. Survival and independence depend on a state’s efforts and thus its relative capabilities.23 If there are asymmetrical gains in trade, then this increases the likelihood of conflict. The economic benefits from trade are related to the amount of power of a state. The 18Ibid., 1979, p. 126; Grieco, 1990, p. 39 19Keohane and Nye, 1977 20See Waltz, 1979, p. 104: “In an anarchic realm, the units are functionally similar and tend to remain so. Like units work to maintain a measure of independence and may even strive for autarchy.” 21Waltz 1979 22See also Powell, 1991 for a discussion about absolute and relative gains theory in international relations. 23Grieco, 1990, p. 10. For liberals, a state’s utility function is not dependent on the pay-offs of another player, state egoism “means that their utility functions are independent of one another; they do not gain or lose utility simply because of the gains or losses of others” (Keohane, After Hegemony, p. 27, quoted in Grieco, 1990, pp. 34, 35). For realists, a state’s core interest is to survive, while for neoliberal institutionalism a state’s core interest is rather “to advance in utility defined individualistically.” See also Grieco, 1988, p. 503 for a comparison of the two theories. 9 3.4 The Realist Thesis 3 THEORETICAL FRAMEWORK more a state benefits by trading, the more resources can be used for aggression. When one party has a relative gain compared to the other party in the trade, then trade has a negative security externality. 24 Asymmetrical gains in trade lead to war via multiple paths. First, after trade has taken place, the party who gained relatively to the other party has more resources, which can be used for military aggression. Another reason could be that the one that loses relatively to the other party is more likely to start a war if he expects that the other party will start a war in the future with his superior military capabilities. A third way asymmetrical gains in trade can lead to war, is a scenario where trade will not take place at all. Even in cases when economic interdependence is high, and free trade generates enormous absolute benefits, the asymmetry in these benefits may lead parties to rationally choose to stop free trade.25 If trade is not available, war may be the only way to obtain highly needed resources. Economic interdependence increases the need for these resources, and therefore also increases the likelihood of war.

#### China will never comply in any case that violates its interests, which is all of them

Dickinson 2012

Steve, China based corporate law attorney, former lecturer at Beijing School of Law, Another China WTO Loss. Another Nail In The Coffin Of World Trade, 2/6/2012 http://www.chinalawblog.com/2012/02/another\_china\_wto\_loss\_another\_nail\_in\_the\_coffin\_of\_world\_trade.html

Preserving its track record of major defeats before the WTO, China recently lost its appeal of the WTO panel decision in the minerals export case. The appeal decision was issued on January 30 and can be found here. Briefly stated, the original panel report held that Chinese export duties and export quotas for certain industrial minerals violate WTO requirements. China was ordered to reduce its duties and dismantle its export quota system. China appealed and lost on all important issues. This decision has important implications. As most observers have noted, the real issue is export quotas and the real target is China’s export quota system for rare earths. Under the terms of this decision, China’s rare earths quota system is in clear violation of the WTO. The U.S. and others expect China to now act on its own and terminate the rare earths quota system. If this is not done voluntarily, the U.S. and the European Union have threatened to bring a follow-up action in the WTO, targeting rare earths. After this victory in the metals case, such an action against China would almost certainly succeed. More important, China has an extensive export quota system covering over 600 products. These are all basic materials considered by China to be vital to its internal security: energy, raw materials and food. Under the terms of the panel decision and appeal, it is now clear that China’s entire export quota system is in violation of the WTO. This recent decision on minerals therefore goes far beyond rare earths. It is a challenge to a vast and complicated system that the Chinese see as essential to national survival. Ron Kirk, the U.S. Trade Representative, described the success of the appeal as as a “tremendous victory” for the United States. In reality, the decision is bad for both the United States and China and for the members of the WTO as a whole. This case is a very hot issue in China. After the decision, assessments have appeared from the Chinese government, the Xinhua News Service (the Chinese government’s propaganda arm) and from general business commentators. The universal conclusion of the Chinese is that China has no intent whatsoever to comply with the terms of this decision or any other decision relating to its export quota program or to any other regulatory regime China deems in its national interest (such as China’s restrictions on importing print and audio-visual materials). The basic position set forth in the Chinese press has been as follows: Control of domestically produced raw materials, energy and food are vital to China’s national interest. China will not allow a trade law like the WTO to impact its pursuit of policies such as export quotas that are vital to its national interests. The attempt by the developed countries to use the WTO as a way to attack China’s national interest is unfair and shows bad intent. Such attempts will be rejected. China still intends to remain within the WTO so as to be able to obtain certain trade benefits. Rather than openly disregard the minerals decision, China will resort to “procedural games” (游戏规则) to render any response against China ineffective as a practical matter. China is proud of how it has used “procedural games” to avoid its responsibilities to respond to adverse WTO decisions and it openly states that it will continue to use this approach in these “national interest” cases. In fact, the term “procedural games” has become a standard feature of China’s trade policy vocabulary. This result is bad for supporters of the WTO trade system and it is bad for China. It is bad for the supporters because it exposes the weakness of the WTO dispute resolution process for resolving serious trade conflicts. China’s recent series of losses in the WTO justifies the US and other countries imposing major tariff and related trade sanctions against China, but no such sanctions have been imposed and China has concluded that no such sanctions will ever be imposed. China correctly believes that it can afford to ignore adverse WTO decisions because the complaining countries have no interest in actually imposing sanctions. We can thus expect China to continue ignoring most (all?) adverse WTO decisions against it. This will serve to progressively weaken the WTO trade system. The odd thing about the export quota case, however, is that China itself is likely to be the biggest loser. China is the major importer in the world of raw materials, energy and food products. China therefore absolutely requires an open and fair export system for such products. By acting to support mercantilist export quotas and other restrictions on the export of critical raw materials, China is acting directly against its own economic and national security interest. China’s control of the rare earths export market has convinced it that it can become a rare earths version of OPEC, giving them power to finally dictate terms to the developed world. This dream has blinded China to the real risks of its plan. Both China and the U.S. are acting recklessly in a way that serves to undermine the WTO trade system. The damage has been done. The WTO minerals ruling is just another nail in the coffin. The WTO has been murdered. China pulled the trigger and the U.S. and Europe supplied the gun.