## OFF

### 1NC

#### Interp: Reduce means permanent reduction – it’s distinct from “suspend”

Reynolds 59 – Judge (In the Matter of Doris A. Montesani, Petitioner, v. Arthur Levitt, as Comptroller of the State of New York, et al., Respondents [NO NUMBER IN ORIGINAL] Supreme Court of New York, Appellate Division, Third Department 9 A.D.2d 51; 189 N.Y.S.2d 695; 1959 N.Y. App. Div. LEXIS 7391 August 13, 1959, lexis)

Section 83's counterpart with regard to nondisability pensioners, section 84, prescribes a reduction only if the pensioner should again take a public job. The disability pensioner is penalized if he takes any type of employment. The reason for the difference, of course, is that in one case the only reason pension benefits are available is because the pensioner is considered incapable of gainful employment, while in the other he has fully completed his "tour" and is considered as having earned his reward with almost no strings attached. It would be manifestly unfair to the ordinary retiree to accord the disability retiree the benefits of the System to which they both belong when the latter is otherwise capable of earning a living and had not fulfilled his service obligation. If it were to be held that withholdings under section 83 were payable whenever the pensioner died or stopped his other employment the whole purpose of the provision would be defeated, i.e., the System might just as well have continued payments during the other employment since it must later pay it anyway.  [\*\*\*13]  The section says "reduced", does not say that monthly payments shall be temporarily suspended; it says that the pension itself shall be reduced. The plain dictionary meaning of the word is to diminish, lower or degrade. The word "reduce" seems adequately to indicate permanency.

#### Violation – they fiat a temporary waiver of medicines for covid

#### 1. Ground – allows affs to put infinite conditions in the plan – makes it impossible to be neg. aff doesn’t specify the timeframe for how long a waiver will be, which allows them to skirt neg offense

#### 2. Precision – if the condition in the plan is not met, IPP for medicines are not being reduced – means they don’t affirm

#### Paradigm Issues –

#### 1. Fairness first – debate is a game, and it’s the only way to determine the better debater

#### 2. Topicality is Drop the Debater – it’s a fundamental baseline for clash, best way to set norms

#### 3. Use Competing Interps –

#### Race to the top

#### Reasonability is arbitrary and invites judge intervention

#### 4. No RVI’s –

#### Chilling effect on T and theory

#### Encourages baiting

#### Illogical – you don’t win for being fair

#### 5. T before theory – less time to set norms, 1NC abuse was necessary to check 1AC abuse

### 1NC

#### The biotech industry is strong now---it’s weathered the COVID storm.

Cancherini et al. 21 – Consultant in M`cKinsey’s Brussels office

Laura Cancherini, Joseph Lydon, Jorge Santos da Silva, Alexandra Zemp, “What’s ahead for biotech: Another wave or low tide?,” McKinsey & Company, April 2021, https://www.mckinsey.com/industries/life-sciences/our-insights/whats-ahead-for-biotech-another-wave-or-low-tide

Unlike most industries in these extraordinarily challenging times, biotech is experiencing a high. Executives in many other sectors are becoming more pessimistic about the outlook for their businesses as the global pandemic continues to spread.1 But the search to understand and find treatment or preventive solutions to COVID-19 has focused intense government, media, and public attention on science and medicine, reinforcing the perception that biotech acquisitions and partnerships represent a good investment.

In an effort to understand worldwide biotech financing in the context of the COVID-19 crisis, McKinsey analyzed the sector’s financial performance and interviewed 20 C-level executives from small and midsize biotechs and venture-capital (VC) firms.

The pandemic has had an enormous financial impact on many sectors, but biotech has weathered the storm: after a brief downturn early in the crisis, it recovered quickly (Exhibit 1). Between January 2020 and January 2021, the average share price for European and US biotechs increased at more than twice the rate of the S&P 500, and Chinese biotechs performed more than six times better, with their average share price more than doubling in a year. Overall, biotech is outperforming its sister industry, pharmaceuticals, as well as many household-name consumer-goods and technology companies.

With acquisitions, partnerships, IPOs, and fundraising still increasing, biotech’s star has, if anything, risen higher than it was before the pandemic. The industry’s response to the crisis, its record of innovation, and its reputation as a safe haven for investment have all served it well. But whether biotech can sustain this performance is open to question. This article looks at the industry’s record of growth, its resilience during the global pandemic, and the factors that could determine whether the biotech wave continues.

#### Biotech is key to climate change solutions---waiving IP rights decks it by setting a sweeping precedent that chills innovation.

Brand 21 – Assistant General Counsel and Director of Intellectual Property at the Biotechnology Innovation Organization

Melissa Brand, “TRIPS IP Waiver Could Establish Dangerous Precedent for Climate Change and Other Biotech Sectors,” IP Watchdog, May 2021, https://www.ipwatchdog.com/2021/05/26/trips-ip-waiver-establish-dangerous-precedent-climate-change-biotech-sectors/id=133964/

While the discussions around waiving intellectual property (IP) rights set forth in the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) are currently (and somewhat amorphously) limited to COVID-19 related drug and medical products, it is probably shortsighted to ignore the implications for other technologies critical to sustaining our environment and advancing a more healthful world. In fact, if we want to ensure continued investment in these technologies, we should be very concerned about the message conveyed by the international political tide: if you overcome a challenging scientific problem and your solution has the potential to save lives, be prepared to be subjected to intense political pressure and to potentially hand over your technology without compensation and regardless of the consequences.

The biotech industry is making remarkable advances towards climate change solutions, and it is precisely for this reason that it can expect to be in the crosshairs of potential IP waiver discussions. President Biden is correct to refer to climate change as an existential crisis. Yet it does not take too much effort to connect the dots between President Biden’s focus on climate change and his Administration’s recent commitment to waive global IP rights for Covid vaccines (TRIPS IP Waiver). “This is a global health crisis, and the extraordinary circumstances of the COVID-19 pandemic call for extraordinary measures.” If an IP waiver is purportedly necessary to solve the COVID-19 global health crisis (and of course we dispute this notion), can we really feel confident that this or some future Administration will not apply the same logic to the climate crisis? And, without the confidence in the underlying IP for such solutions, what does this mean for U.S. innovation and economic growth? United States Trade Representative (USTR) Katherine Tai was subject to questioning along this very line during a recent Senate Finance Committee hearing. And while Ambassador Tai did not affirmatively state that an IP waiver would be in the future for climate change technology, she surely did not assuage the concerns of interested parties.

International Pressure May Be Influencing Domestic IP Policy

The United States has historically supported robust IP protection. This support is one reason the United States is the center of biotechnology innovation and leading the fight against COVID-19. However, a brief review of the domestic legislation arguably most relevant to this discussion shows just how far the international campaign against IP rights has eroded our normative position. The Clean Air Act, for example, contains a provision allowing for the mandatory licensing of patents covering certain devices for reducing air pollution. Importantly, however, the patent owner is accorded due process and the statute lays out a detailed process regulating the manner in which any such license can be issued, including findings of necessity and that no reasonable alternative method to accomplish the legislated goal exists. Also of critical importance is that the statute requires compensation to the patent holder. Similarly, the Atomic Energy Act contemplates mandatory licensing of patents covering inventions of primary importance in producing or utilizing atomic energy. This statute, too, requires due process, findings of importance to the statutory goals and compensation to the rights holder.

A TRIPS IP waiver would operate outside of these types of frameworks. There would be no due process, no particularized findings, no compensation and no recourse. Indeed, the fact that the World Trade Organization (WTO) already has a process under the TRIPS agreement to address public health crises, including the compulsory licensing provisions, with necessary guardrails and compensation, makes quite clear that the waiver would operate as a free for all.

Forced Tech Transfer Could Be on The Table

When being questioned about the scope of a potential TRIPS IP waiver, Ambassador Tai invoked the proverb “Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime.” While this answer suggests primarily that, in times of famine, the Administration would rather give away other people’s fishing rods than share its own plentiful supply of fish (here: actual COVID-19 vaccine stocks), it is apparent that in Ambassador Tai’s view waiving patent rights alone would not help lower- and middle-income countries produce their own vaccines. Rather, they would need to be taught how to make the vaccines and given the biotech industry’s manufacturing know-how, sensitive cell lines, and proprietary cell culture media in order to do so.

In other words, Ambassador Tai acknowledged that the scope of the current TRIPS IP waiver discussions includes the concept of forced tech transfer. In the context of climate change, the idea would be that companies who develop successful methods for producing new seed technologies and sustainable biomass, reducing greenhouse gases in manufacturing and transportation, capturing and sequestering carbon in soil and products, and more, would be required to turn over their proprietary know-how to global competitors.

While it is unclear how this concept would work in practice and under the constitutions of certain countries, the suggestion alone could be devastating to voluntary international collaborations. Even if one could assume that the United States could not implement forced tech transfer on its own soil, what about the governments of our international development partners? It is not hard to understand that a U.S.-based company developing climate change technologies would be unenthusiastic about partnering with a company abroad knowing that the foreign country’s government is on track – with the assent of the U.S. government – to change its laws and seize proprietary materials and know-how that had been voluntarily transferred to the local company.

Necessary Investment Could Diminish

Developing climate change solutions is not an easy endeavor and bad policy positions threaten the likelihood that they will materialize. These products have long lead times from research and development to market introduction, owing not only to a high rate of failure but also rigorous regulatory oversight. Significant investment is required to sustain and drive these challenging and long-enduring endeavors. For example, synthetic biology companies critical to this area of innovation raised over $1 billion in investment in the second quarter of 2019 alone. If investors cannot be confident that IP will be in place to protect important climate change technologies after their long road from bench to market, it is unlikely they will continue to invest at the current and required levels.

Next on the Chopping Block

It is quite reasonable to be worried about the broad implications of a TRIPS IP waiver precedent. International campaigns to weaken IP rights seem to be taking hold in U.S. domestic policy. The TRIPS IP waiver discussions will not conclude in the near term and will not yield more shots in people’s arms. This is not even truly disputed, as our own administration acknowledges that the goal here is technology transfer abroad. Given the signaling that our Administration believes waiving IP rights is an appropriate measure to end global crises, it is proper to worry that facets of the biotech sector addressing climate change may be next on the chopping block.

#### Biotech innovation is uniquely key to combatting climate change.

McMurry-Heath 21 – Physician-scientist and the president and CEO of the Biotechnology Innovation Organization

Michelle McMurry-Heath, “To help solve climate change, look to the biosciences,” STAT News, May 2021, https://www.statnews.com/2021/05/21/climate-change-solutions-from-biosciences/

President Biden’s pledge to cut U.S. greenhouse gas emissions in half by 2030 is an admirable and ambitious undertaking. It’s nearly double the goal set by President Obama in 2015. And it establishes the United States as a world leader in battling climate change.

But reaching the president’s target in just under 10 years is a monumental task. It’s so big, in fact, that we’ll never get there by government action alone. No amount of vehicle efficiency standards, forest conservation efforts, or gas taxes can fully solve the problem.

We have to science our way out of it.

The biosciences, including biotechnology, will play a pivotal role in the fight against climate change. It is already leading the way on several fronts. According to a report from BIO, the organization I work for, the biotech industry’s green initiatives could mitigate the equivalent of 3 billion tons of carbon dioxide every year by 2030, or about half of the country’s annual CO2 emissions.

Take food, for example.

Food consumption — and production — is central to human existence. Global food production accounts for one-quarter of greenhouse gas emissions. A recent report from an international team of researchers concluded that even if all other fossil fuel emissions were eliminated, emissions from food production alone would prevent us from reaching a key goal of the climate change agreement signed in Paris: preventing the global temperature from rising more than 2 degrees Celsius.

Halting food production isn’t an option, so biotech companies are helping farmers become part of the climate solution. Take, for example, Boston-based Joyn Bio. It is engineering bacteria that pull nitrogen directly from the atmosphere. These microbes then pass the nitrogen to crops like wheat and corn, reducing the need to make, transport, and apply nitrogen fertilizers, which reduces greenhouse gas emissions.

Minnesota-based Acceligen is using a technique it calls precision breeding that improves the health of livestock while reducing their waste, greenhouse gas emissions, and water usage.

Biotechnology can also help protect food from climate change. As fungal and bacterial infections accelerated by human-driven environmental disturbances threaten to wipe out Cavendish bananas, Tropic Biosciences in the United Kingdom is using CRISPR gene-editing technology to engineer infection-resistant bananas.

Companies are also rethinking how food is packaged to reduce plastic pollution and open high-tech paths to broader adoption of biodegradables. This would be a game-changer in the interlinked fight to modulate climate change and protect the oceans.

Globally, 100 million tons of plastic are produced every year, 8 million of which ends up in the oceans. The production of plastic requires at least 8% of the world’s petroleum. Greenhouse gas emissions from plastic production and incineration could rise from the current 850 million tons a year to 3 billion tons a year by 2050. And discarded plastic that ends up in the ocean slowly breaks down in sunlight, releasing greenhouse gases and toxic microplastics.

Georgia-based Danimer Scientific — partnering with the Mars Wrigley candy company — is working on biodegradable packaging that uses plant oils to manufacture “plastic” that dissolves in soil and water. Bioplastics and biopolymers can reduce greenhouse gas emissions reductions by up to 80% more compared to their petroleum-based counterparts.

Fuel is another target for biotechnology. Transportation accounts for the highest percentage of U.S. greenhouse gas emissions. While electric cars are gaining popularity, and the $174 billion allocated to support the transition to electrics in Biden’s American Jobs Plan is important, biofuels — which are carbon neutral — will be needed to help reduce emissions in transportation and need comparable support.

The biotech company Synthetic Genomics, for instance, is utilizing saltwater algae, which convert sunlight and carbon dioxide into biomass, to make sustainable auto fuel. By 2025, 10,000 barrels of the algal biofuel could be produced per day for commercial use.

Biofuels will also play an important role in air travel. While flying accounts for less than 3% of global CO2 emissions a year, on a per-mile calculation it’s the least green form of travel. With the number of air travel passengers expected to double by 2040, the Biden administration is upping the financial incentives — through tax credits — for companies that produce sustainable aircraft fuels.

Biotech firms are already stepping up. Companies like Neste, Gevo, and World Energy are using everything from algae to used or wasted cooking oil to create sustainable jet fuels. LanzaTech recycles carbon from industrial emissions and other sources and turns it into aviation fuel — and has recently partnered with other corporations to bring that fuel to market for commercial airline use.

With help from biotechnology, the U.S. can achieve the climate change goals outlined by the Biden administration and the Paris Agreement. Human progress and technology got us into this mess. That same ingenuity can help get us out.

#### Global warming is an existential threat.

Tonn 21 – Professor of Political Science at the University of Tennesse Knoxville

Bruce E. Tonn, “Anticipation, Sustainability, Futures and Human Extinction: Ensuring Humanity’s Journey into The Distant Future,” Routledge, May 2021, https://www.taylorfrancis.com/books/mono/10.4324/9781003000105/anticipation-sustainability-futures-human-extinction-bruce-tonn

Unfortunately, unlike the aftermath of the Black Plague in the Middle Ages, human population continued to slide, or it should be said that the number of Havenots continued to decrease. Next up was climate change. For aforementioned reasons, the countries of the world had not stemmed the use of fossil fuels and, therefore, had not reduced the emissions of GHG into the atmosphere. Few technologies had been put in place to reduce GHG in the atmosphere or sequester the carbon elsewhere. It was as if the planet extracted revenge through withering droughts in Central China, Northern Africa, and North Central North America, deadly heat waves in Western and Central Europe, implacable sea-level rise in the Asia Pacific region, and apocalyptic storms worldwide. People were literally washed away down rivers and into oceans. Agricultural systems collapsed outside of the wealthy areas of the Haves, which were quickly becoming self-sufficient and hermetically sealed to the world of the Havenots. The built environment and urban infrastructures were pummeled. Another round of diseases, mostly mosquito-borne this time, ravaged the world’s population. The developed world offered no safety net for the rest of the world. The largest losses of population were in Asia and Africa, closely followed by Central and South America. Within another thirty years, another billion people perished.

During the next handful of decades, the remaining humans failed to bond together to rebuild human civilization. In fact, just the opposite happened. Instead of conflicts between nations or even ‘clashes of civilizations’, deadly and widespread violence arose between the Haves and Havenots. At the outbreak of the unrest, the militaries of the world had been deployed to protect the wealth and property of the Haves. First as pandemics roiled the world and then as major economic systems collapsed, the viciousness and desperateness of the attacks of the Havenots against the Haves increased.

The military leaders had a choice: defend the Haves or become allies of the Havenots. The Haves had all the technological advantages (not only their life-prolonging technologies, useful if they could survive the chaos, but also their nanotechnologies, biotechnologies, limited but developing renewable energy technologies, and information technologies). The Havenots had strength in numbers. The majority of the military leaders whose forces were equipped with the most sophisticated weaponry and other advanced technologies made a devil’s bargain with the Haves, security in exchange for the promised long-life and luxury.

A protracted period of violence ensued. Both the Haves and Havenots suffered substantial casualties. Eventually, the Haves and their superior military forces ended up in approximately 5,000 heavily defended enclaves (or lifeboats, from their point of view), with about 1,000 humans in each enclave. Most enclaves were former military bases, although many were former resort islands and other easily defensible haunts of the Haves. The enclaves brought to mind the walled cities of the Middle Ages. Unlike their feudal ancestors, they did not rely upon serfs living outside the walls for their food and materials. Because of their technological prowess, they were, after a period of transition, mostly self-sufficient. The poor and otherwise ‘useless’ and ‘excessive’ inhabitants of the enclaves, mostly lower ranking soldiers but also some weak Haves, were quickly evicted so as not to stress the resources of their systems, which would need to last for centuries.

During this period of violence, the Haves and the military systematically destroyed all advanced technologies outside of the enclaves. This was done so that the Havenots could not develop the capabilities to conquer the remaining enclaves. The military effectively destroyed the remaining energy-producing facilities (including the nuclear power plants), the electricity infrastructure, the worldwide telecommunications infrastructure, shipping and transportation facilities, and even dams and irrigation systems. The result of these attacks was that the Havenots on the outside had little or no technology, no concentrated energy resources, no information technology, no electricity, no water systems, and no advanced weapons. Agricultural productivity approached pre-industrial levels. Plants stressed by heat and drought failed to produce crops. Farm animals and plants regularly fell to agricultural diseases that had previously been preventable. Wild animal stocks were slaughtered with no thought about tomorrow. Accessible stocks of fish in the lakes and oceans were depleted. Leadership and new government structures never re-evolved; anarchy reigned. New pathogens circled the globe with astonishing speed. It was every man, woman, and child for themselves. Over the next century, the reduction in population was steady, and another two billion perished.

Catastrophic changes in the world’s ecosystems coincided with the violence and also plagued the Havenots. In a mad scramble to keep themselves fed, the Havenots severely depleted the world’s stocks of birds and mammals, big and small. This reduction in the number of insect predators led to an explosion in the numbers of destructive insects. Locusts and grasshoppers devastated remaining agricultural crops. In a particularly gruesome twist of fate, the depletion of mammals and birds also reduced the food supplies for mosquitoes around the world. As their predators were eliminated and as their food supplies dwindled, they began to viciously swarm individual humans who lacked shelter. Many did not survive the onslaught.

The Havenots and the Haves alike were killed by immense fires. The dramatic rise in CO2 in the atmosphere and the expansion of ranges of temperate and tropical ecosystems promoted the accelerated growth of plant life all over the planet. Megatons of increased biomass respirated increasing levels of oxygen into the atmosphere. The bacteria that consumed the remaining oil and natural gas reserves also emitted substantial amounts of oxygen into the environment. Indeed, the level of oxygen in the atmosphere quickly began to approach 30%, from a level of about 21% at the turn of the twenty-first century. More plant materials, drought, and oxygen-rich air led to truly horrific conflagrations in North America, Europe, Northern Asia, Southern Africa, and Central and South America. Humans died directly in the fires and also died of asphyxiation if they were in the vicinity of the most massive fires.

Life in the enclaves became decidedly dystopian. The main problem was that no enclave possessed the critical mass of people, knowledge, and materials to maintain their technological base. Technology failed. In most cases, it was impossible to replace and/or fabricate new specialized chips and parts. Because the enclaves had destroyed the globe’s telecommunications infrastructure to deny the Havenots the ability to easily organize, they were unable to communicate with other enclaves. The Haves continued to perceive the Havenots and the ‘outside’, disease-ridden world, to be a threat, although had they left their enclaves they would have known otherwise. This perception kept the Haves sequestered in their enclaves. Over the next 100 years, most of the enclaves collapsed from starvation or were eventually overrun by the Havenots, having failed like the Utopian communities of the eighteenth and nineteenth centuries.

A few enclaves, however, took a different path to extinction. This is because some Haves did achieve part of their vision of Utopia during the hell storm that surrounded them. They did achieve some measure of immortality. In a handful of enclaves, there were Haves who were actually a couple of hundred years old. But they had not planned on the destruction of the rest of the world and their technologies were riddled with bugs.

It was imperative that these Haves strictly control their population. Despite their weaponry, they were essentially trapped in their enclaves. The outside world was disease ridden, chaotic, dangerous, and empty of valuable resources. They had no survival skills beyond their advanced technologies. They could not survive outside of the enclaves. Controlling their population meant that the births needed to be well planned and limited in number, especially since their numbers had been swollen with the ranks of the military.

The major flaw in this strategy is that these Haves, who desperately wanted to be immortal, basically achieved this goal. Through enhanced nutrients, key replacement organs, and medical nanotechnologies, they were able to keep their bodies in excellent condition. They were not afflicted with heart disease or cancer or obesity or diabetes. Their lives within the enclaves were rather safe because Havenots found the risks not worth the effort of confronting these small but deadly enclaves. The Haves did not travel at all nor have many on-site accidents. They were not murdered in the streets, although inevitably some were killed during disputes in their enclaves. They did not commit suicide; they were constitutionally incapable of taking their own lives, having committed themselves to immortality. After a while, the turnover in the enclaves fell to close to zero. No one died. And the enclaves could not afford to allow new births. These Haves were not too worried. After all, they had time on their side, right?

However, as time went on, these super-elders lost the ability to reproduce naturally. The eggs in the female’s ovaries aged and could not be rejuvenated. Also, frozen eggs and sperm turned out to have much shorter shelf lives than had been thought. To reproduce, that left cloning. Although advances in cloning had been impressive, problems with human cloning had not been overcome simply because the practice had been banned by most countries at the beginning of the twenty-first century and had been taboo in the enclaves for most of the time. However, these Haves decided to try to clone humans though they lacked skilled scientists to oversee this process. The results were disastrous. Miscarriages were the most common results. Many fetuses that came to term died shortly after birth. Most were aborted, those that were allowed to go to term died minutes after being born. The very few that lived further were afflicted with cognitive deficiencies, deformed limbs, and, tragically, were infertile. The attempts at cloning were rapidly abandoned.

Another problem that these Haves did not anticipate was the psychological aspects of aging. The minds of these very old people were slowly becoming completely dysfunctional. Of course, they did not suffer from Alzheimer’s or Huntington’s or Parkinson’s diseases. They had genetic tests for these maladies and could prevent or treat these diseases without much effort or risk. What they did suffer from was system overuse and overload. Too many memories over too many years were leading to inefficiencies in memory retention and organization. Sleep no longer was sufficient to help keep their minds organized. As their collective capabilities were eroding at about the same rate, these Haves were unable to recognize what was happening to them. Because of this creeping functional senility, they were also increasingly unable to maintain their other technologies in tip-top shape. Plans to move out of the enclaves vanished. Pictures of health, they were going mad down the path to extinction. Eventually, even these more resilient enclaves perished as their diminished mental capabilities proved insufficient to keep themselves alive.

When the last enclave fell, there were around 500 million Havenots left on earth. Then, what was once referred to as northwest Wyoming exploded in the largest volcanic eruption the earth had witnessed in the past 20 million years. The eruption was 10,000 times the size of the St. Helens eruption. The soot pushed up into the atmosphere severely blocked out the sun everywhere on the earth for several years. Plant life suffered due to the reduction in photosynthesis. Much like what happened several million years ago to the dinosaurs, the number of humans on the earth dropped down to the mere thousands.67

The remaining hunter-gatherer Havenots were exceedingly resourceful. Many were able to scrape by, living in caves, or building shelter from rubble and scavenging for food and water. They had been able to deal with the hell of climate change and seemed poised to deal with this new round of precipitous cooling. Unfortunately, a final sequence of events on a geological scale would soon seal their fate.

The Havenots were a very unlucky lot. Weakened from disease, malnutrition, and inbreeding, they were also becoming very lethargic, light-headed, and disoriented. The shortness of breath was the key symptom explaining this new malady. You see, they were beginning to suffocate because the oxygen levels in the atmosphere had dropped below 20%.

What had happened to the oxygen? The conflagrations had drawn a great deal of oxygen out of the atmosphere. The remnants of civilization were also oxidizing. Old bridges, steel buildings, and especially billions of metal automobiles, trucks, motorcycles, and signs were rusting and rapidly sucking oxygen out of the atmosphere. As the Havenots did not have the technologies in place to produce their own oxygen, they suffered from oxygen deprivation en masse.

Cooling continued to worsen. All the negative feedback effects were in place: severe reduction of sunlight, loss of plant life, reductions in greenhouse gases in the atmosphere, increased radiative cooling, further loss of plant life, further reductions in greenhouse gases, etc. The Arctic Ocean, already refrozen, started its march southward. The Antarctic ice fields rapidly expanded. Glaciers, which had reappeared on the mountain-tops, quickly moved toward the valleys. As a consequence, sea levels dropped precipitously worldwide.

As a result, enormous amounts of rock now stood bare to the elements. Land scrapped clear due to erosion from floods and storms was not revegetated and was also exposed to the elements. These rocks, along with the husk of human civilization, oxidized, drawing ever more oxygen out of the environment. Indeed, large areas of the earth began to resemble the Red Planet, Mars. All remaining aerobic species not only faced a life deprived of sufficient oxygen, but they now faced the prospect of asphyxiation. Within another couple of hundred years, the oxygen in the atmosphere dropped below 19.5%, on its way to a low of 15%. The last human took her last breath in Southern Africa, just like the last Gorgon did over 250 million years ago.68

### 1NC

#### Text: The member nations of the World Trade Organization ought to mandate compulsory licensing for medicines for COVID-19.

#### Compulsory licensing is distinct from the aff and solves.

Chopskie 21 – Partner at Squire Batton Boggs

Greg Chopskie, “When Compulsory Licenses Apparently Just Won’t Do: The US Backs Waiver of Rights to IP Relating to COVID-19,” Global IP & Technology Law Blog, May 2021, https://www.iptechblog.com/2021/05/when-compulsory-licenses-apparently-just-wont-do-the-us-backs-waiver-of-rights-to-ip-relating-to-covid-19/

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) set the minimum standards for intellectual property protection in the world today. Relevant here, TRIPS permits WTO Member states to engage in compulsory licensing as part of the agreement’s overall attempt to strike a balance between promoting access to existing drugs and promoting intellectual property incentives.

The term “compulsory licensing” does not appear in TRIPS. Rather, Article 31 of TRIPS permits a Member State to “allow[] for other use of the subject matter of a patent without the authorization of the right holder” as long as “the following provisions [are] respected.”

Two provisions are particularly relevant here.

Article 31(b) generally requires that “such use may only be permitted if, prior to such use, the proposed user has made efforts to obtain authorization from the right holder.” That requirement, however, “may be waived by a Member in the case of a national emergency or other circumstances of extreme urgency or in cases of public non-commercial use.”

Second, Article 31(h) requires that, regardless, “the right holder shall be paid adequate remuneration in the circumstances of each case, taking into account the economic value of the authorization.”

TRIPS does not, however, purport to establish a “one size fits all” approach to intellectual property, a fact made clear by the 2001 Doha Declaration. In that Declaration, the WTO stated:

“Each member has the right to grant compulsory licences and the freedom to determine the grounds upon which such licences are granted.”

“Each member has the right to determine what constitutes a national emergency or other circumstances of extreme urgency, it being understood that public health crises, including those relating to HIV/AIDS, tuberculosis, malaria and other epidemics, can represent a national emergency or other circumstances of extreme urgency.”

Nonetheless, in October 2020, South Africa and India pushed the WTO for more, demanding that the Council essentially impose a ban on COVID-19 patents. Despite widespread support, that request has stalled. Likely not for much longer. The issue of a waiver—despite the compulsory license provisions of TRIPS—will certainly be the center of discussion at the June 8-9 meeting of the TRIPS Council. With the US backing and support of an India/South Africa-style “waiver” of TRIPS provisions relating to COVID-19, it may just pass.

#### Compulsory licensing mechanisms resolve access to tech.

Urias & Ramani 20 – Research Fellow, UNU-MERIT; Professorial Fellow, UNU-MERIT

Eduardo Urias, Shyama V. Ramani, “Access to medicines after TRIPS: Is compulsory licensing an effective mechanism to lower drug prices? A review of the existing evidence,” Journal of International Business Policy, Vol. 3, 2020, https://link.springer.com/article/10.1057/s42214-020-00068-4

Following the Doha Declaration, in 2003, the TRIPS Council made a first formal attempt, referred to as the ‘August 30 Decision’, to allow for exports under compulsory licenses to countries with no technological capacity to produce the drugs they needed. Two years later, on 6 December 2005, the August 30 Decision became permanent through insertion of Article 31bis after Article 31 and an Annex to the TRIPS Agreement after Article 73. The August 30 Decision ratified the ‘Paragraph 6 system’ allowing the use of compulsory licensing to exclusively export to countries that could not produce the medicines themselves due to a lack of technological capacity. This system was formally built into the TRIPS Agreement after acceptance of the Protocol amending the TRIPS Agreement by two-thirds of the WTO in 2017. This was the first time that the WTO accords were amended since the organization opened in 1995.

#### Doesn’t link to the net benefit---compulsory licensing maintaining intellectual property protections.

Bacchus 20 – Member of the Herbert A. Stiefel Center for Trade Policy Studies, the Distinguished University Professor of Global Affairs and director of the Center for Global Economic and Environmental Opportunity at the University of Central Florida

James Bacchus, “An Unnecessary Proposal: A WTO Waiver of Intellectual Property Rights for COVID-19 Vaccines,” Free Trade Bulletin, No. 78, CATO Institute, December 2020, <https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#balancing-ip-rights-access-medicines-not-new-wto>

Compulsory licensing of medicines is not popular with private drug manufacturers because it is a derogation from the customary workings of market-​based capitalism. However, as these actions by WTO members in 2001, 2003, and 2017 illustrate, compulsory licensing is not a derogation from the balance struck by the members of the WTO between protecting IP rights and ensuring access to essential medicines. Rather, it is a crucial part of that balance. The balance struck in the WTO treaty includes the option of compulsory licensing during health emergencies.

## Case

### AT: Solvency

#### Squo solves.

Crosby et al. 6-8, Daniel Crosby specializes in international trade, investment and matters related to public international law. A partner in our International Trade practice and the manager of our Geneva office, Daniel helps sovereign and business clients to achieve practical economic objectives around the world by applying and negotiating international agreements. JDSUPRA, June 8, 2021. “Update on the Proposed TRIPS Waiver at the WTO: Where is it Headed, and What to Expect?” <https://www.jdsupra.com/legalnews/update-on-the-proposed-trips-waiver-at-8411942/> brett

Proponents have advanced the proposed TRIPS waiver in the name of meeting global vaccine demand. But even in the absence of a waiver, pharmaceutical manufacturers have continued efforts to expand global production and distribution of COVID-19 vaccines and therapies, with a focus on expanding access to developing countries. For example, Pfizer announced its plan to deliver two billion doses to developing nations over the next 18 months, with one billion doses coming this year.8 One forecast estimates that, by the end of 2021, total global COVID-19 vaccine production may exceed 11 billion doses – an amount potentially sufficient to achieve global herd immunity.9

Several pharmaceutical industry groups have also proposed a five-step plan to “urgently advance COVID-19 equity,” including: (1) increasing dose sharing among countries through COVAX and other mechanisms; (2) optimizing production of vaccines and raw materials; (3) eliminating trade barriers for critical raw materials; (4) supporting country readiness to deploy vaccination programs; and (5) driving further innovation.10

Manufacturers have also continued to partner with other companies in efforts to scale up global production. For example, Moderna recently engaged Samsung Biologics to provide fill-and-finish manufacturing for Moderna’s vaccine.11 Merck and Gilead also each entered into or expanded voluntarily licensing programs with manufacturers in India to produce the companies’ respective COVID-19 antiviral agents molnupiravir and remdesivir.12

Some WTO members have also considered using the existing TRIPS flexibilities to expand their vaccine access. For example, Bolivia has continued to pursue its effort to import the Johnson & Johnson COVID-19 vaccine from Canadian company Biolyse Pharma, under a compulsory license pursuant to TRIPS Article 31bis (if one could be obtained).13

#### The issue is lack of resources, not IPR -- they disrupt the ability of existing companies to scale up production

Brown 21, Delphine Knight Brown is a Partner in the firm’s Litigation Practice Group, and Intellectual Property Litigation Group. With over twenty years of trial experience, Delphine’s practice focuses on complex intellectual property and technology cases, with extensive experience in the life sciences industry. Freeborn Attorneys at Law, Summer 2021. “Will TRIPS Waiver of IP Protection for COVID-19 Vaccines Serve Global Need?” <https://www.freeborn.com/sites/default/files/downloads/Powerhouse%20Points_Newsletter_Summer%202021%20Final.pdf> brett

When the IP waiver concept was first proposed last October, Moderna agreed not to enforce its COVID-19 related patents during the pandemic. But despite Moderna’s voluntary waiver of its IP rights, no other company has stepped up to manufacture the Moderna vaccine. The most significant obstacle to COVID-19 vaccine supply is not just the IP rights that companies have obtained, or are pursuing, but rather the lack of raw materials and manufacturing facilities to produce the vaccines. Currently, there are shortages of raw materials and equipment used to make vaccines and biological products.

Unlike drug manufacturing, vaccine production processes are extremely complex and difficult to develop without support from current manufacturers. Additional manufacturers would need to have or acquire skilled expertise in mRNA technology and create or reconfigure manufacturing sites. Manufacturing vaccines requires additional processing steps and testing to assure quality and consistency. Manufacturing vaccines will also likely use the patented technology of other companies, who have not waived their IP rights. Investment in manufacturing is also an important piece of the solution. Whether existing companies can retool facilities and jump start manufacturing or new facilities need to be created through investment will be outcome determinative.

There is little doubt that the waiver proposals would at the very least up-end the existing incentives, including the prospect of future pharmaceutical innovation and development of products, that resulted in the rapid development and approval of COVID-19 vaccines. Moreover, the TRIPS waiver proposals may not have the desired effect of boosting COVID vaccine production and availability of mRNA vaccines. On the other hand, recent attempts at voluntary licensing and technology transfer agreements related to adenovirus vector technology have resulted in increased vaccine production and availability. A TRIPS waiver may not be as effective for more complex vaccine production.

Scaling up COVID-19 vaccine production is not a one-size-fits -all proposition. Ensuring equitable availability and delivery complicates the matter further.

### AT: COVID

#### Medical innovation is critical to addressing COVID AND future disease

Kenan 6-9, The Frank Hawkins Kenan Institute of Private Enterprise develops and promotes innovative, market-based solutions to vital economic issues. With the belief that private enterprise is the cornerstone of a prosperous and free society, the institute fosters the entrepreneurial spirit to stimulate economic prosperity and improve the lives of people in North Carolina, across the country and around the world. Kenan Institute, 6-9-21, “Turbocharging Healthcare Innovation” <https://kenaninstitute.unc.edu/kenan-insight/turbocharging-healthcare-innovation/> brett

As COVID-19 began to spread around the globe, companies and entrepreneurs stepped up to develop new technologies and redeploy existing technologies in their portfolio to tackle the disease and cope with the constraints it brought. The pandemic forced telemedicine into the mainstream and brought mRNA vaccine technology to the forefront. At the same time, new technologies such as CRISPR gene editing and artificial intelligence (AI) approaches have been finding their niche for speeding up drug discovery and development.

Healthcare innovation was already on the fast train before the pandemic. Now, it’s been turbocharged. In this Kenan Insight, we explore why the 2021 Trends in Entrepreneurship Report names emerging technology in the healthcare industry as a key trend for entrepreneurship, along with some of the challenges that come with fast-moving technology advances.

A trajectory of explosive growth

The healthcare industry has experienced extraordinary growth over the past four decades. Big pharma is driving much of this boom, accounting for 10% of the U.S. economy’s overall R&D spending at the end of 2020.1 The medical device industry, expected to generate $54.5 billion over the next four years, is another important player.2 This growth is catching the attention of investors. In 2020, health tech startups raised approximately $14 billion in venture capital funding, nearly double that of 2019.3 CB Insights estimates there are now 51 healthcare unicorns, defined as startups valued at $1 billion or more.

Health-tech venture funding reached record levels in 2020

Chart, bar chart, histogram

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Source: Deloitte analysis of Rock Health’s Digital Health Funding Database

Innovation is a critical driver in the healthcare sector. Increasing rates of innovation can be seen in the sharp rise of U.S. patents granted for pharmaceuticals and medical devices in recent years. Between 2013 and 2019, more than 60,000 pharmaceutical patents and more than 125,000 medical device patents were granted.4 Today, there are more than 18,500 drugs at various stages of the development process worldwide.5

Maturing technologies

The increasing numbers of patent applications, clinical trials and collaborations are leading indicators of a vibrant and growing biopharmaceutical ecosystem. However, the proliferation of innovation tools, rather than just innovative products, is what will allow the next generation of pharmaceutical drugs to be discovered more quickly and more efficiently, to provide more effective treatments and to target diseases that have so far evaded our collective intervention efforts. As scientists learn more about human genes and their connection to diseases, these insights can feed into tools that make drug R&D faster, less expensive and more precise.

AI technology has matured to the point where it can now be used reliably to analyze huge amounts of data and solve extremely complex problems. This has made AI attractive to the pharmaceutical industry as a tool that can enable more efficient identification of new drugs and drug targets. In 2020, drug discovery was the focus area that received the most private AI investment, with more than $13.8 billion invested globally. This was 4.5 times higher than the total for 2019.6

CRISPR gene editing is another hot technology that is enabling the development of more innovative and accurate therapeutic strategies. This tool is making it easier to determine the genes and proteins that cause or prevent disease and thus to identify new targets for potential drugs. As of the second quarter of 2020, there were 724 active companies around the world focused on using or developing CRISPR technology and almost 50 clinical trials involving CRISPR.7

mRNA was certainly one of the brightest technology stars of 2020. After decades of research, mRNA proved to be the ideal solution for developing a highly effective COVID-19 vaccine at record speed. However, this is likely only the beginning of the story for mRNA. Therapies based on mRNA technology are being developed to treat malaria, cancer and multiple sclerosis and we’ll likely see more mRNA-based vaccines designed to fight a host of current and future infectious diseases. As of February 2021, CB Insights reports more than 520 ongoing clinical trials worldwide that were applying mRNA technology to more than 20 disease classes.8

### AT: COVID war

#### COVIDs gone on for a year now -- no escalation means it’s extremely unlikely to trigger.

#### No war from COVID.

Salemi 20 Colette Salemi [microeconomist PhD student in applied economics at the University of Minnesota. Her research focuses on conflict, forced displacement, environmental degradation and their intersections.], 10-15-2020, "Analysis," Washington Post, <https://www.washingtonpost.com/politics/2020/10/15/does-covid-19-raise-risk-violent-conflict-not-everywhere/> EH

The situation in Iraq illustrates how the coronavirus threat and policy responses to the pandemic could lead to an increase in violent conflict. But elsewhere in the world, researchers who tally conflict-event counts see stagnant or even falling numbers. And in some countries, conflict trends don’t appear to be responding to covid-19 at all. My research with Jeff Bloem documents considerable differences in the frequency of conflict events across several countries in recent months. Our findings suggest that the pandemic-conflict relationship seen in Iraq does not appear to exist in many other countries. How we did our research We used the Armed Conflict Location and Event Data (ACLED), a database that counts the number of conflict events daily around the world. For 2019 and 2020, ACLED includes more than 100 countries in Africa, Asia, Latin America and Eastern Europe — and tracks three categories of violent conflict: battles, violence against civilians and explosions/remote violence. We examine trends in the number of conflict events over time. To see whether the trend changes in response to covid-19, we look at what happened after the World Health Organization declared a global pandemic (March 11) or the country declared a lockdown. The relationship between pandemics and conflict is theoretically unclear. In some countries, job losses from the covid-19 pandemic mean people have fewer income-generating options — that can make participation in violence seem a more viable alternative. But if market disruptions and reduced global demand are driving down the value of natural resources such as oil wells, then we may see less conflict over control of such resources. We then conducted case studies based on our knowledge of countries with high rates of violent conflict before covid-19. These include countries with active civil wars (such as Syria) as well as countries with violent militia groups (such as the Philippines). Conflict during the coronavirus pandemic varies greatly Worldwide, we didn’t observe an increase in violent conflict. If anything, conflict has decreased, as the figure below shows.

Chart, line chart

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Violent conflict between March and August 2020 was 23 percent lower than violent conflict during the same period in 2019. Comparing these time periods, battles are down 20 percent and remote violence and bombings are down 40 percent. But violence against civilians — the deliberate attack of unarmed noncombatants by armed groups — continued at similar rates globally. Do these results suggest that covid-19 is fueling reductions in conflict? Probably not — in Syria, for instance, other factors may explain the declines. On March 5, Turkey and Russia brokered a cease-fire agreement covering the Idlib province in Syria. Idlib is the final front of the Syrian government campaign, so this cease fire led to a dramatic decline in violent events nationwide. But the Idlib cease fire wasn’t motivated by covid-19, and would have taken place anyway, pandemic or no pandemic. So even when violence is falling in the covid-19 era, we have to recognize that declines could be driven by events that happened to take place around the same time as the pandemic’s arrival. The same could be true in cases where violent conflict increased — these upticks in violence could have little to do with covid-19. In the ongoing war between Libya’s Government of National Accord (GNA) and the Libyan National Army (LNA), the number of violent events rose steadily in the first half of 2020. The trend line does not change at all when Libya started to respond to covid-19 in March. Libya’s daily violent-incident counts began to fall in late spring, which corresponds with the GNA’s successful seizure of critical holdings from the LNA militia. These results suggest that the GNA and LNA continued their campaigns relatively undeterred by the pandemic. Conflict eventually declined — but this largely reflects the LNA’s retreat. What about other countries? In places with active rebel groups and militias, such as the Philippines and Iraq, we find mixed results. Reports from both countries suggest that rebel groups and government officials (in the Philippines, but not Iraq) are increasing attacks to take advantage of the opportunities in the covid-19 climate. We see little if any change in the number of violent-conflict events per day in the Philippines. But we do see evidence of escalating conflict in Iraq (see figure), much of it attributed to a rise in Islamic State activity. What happens in the Philippines is not an exception. While violent conflict rose in Nigeria for some time, trends are relatively unchanged in Somalia and Congo. These mixed outcomes suggest that there’s still much to learn about pandemics and conflict.

#### No reason why us and china go to war over covid all of a sudden – no brightline for escalation

### AT: COVID extinction

#### Covid doesn’t cause extinction – Their author wrote this at the start of the pandemic, which is entirely speculative and doesn’t take into account squo measures such as social distancing and vaccines, which prevent mass spread – 2020 proves

### AT: LIO

1. WTO not key to LIO – WHO, UN and other international institutions all check
2. No reverse causal ev that vaccine agreement will increase lio again
3. LIO dead – trump’s rhetoric towards alliances permanent ruined the lio

### AT: WTO

WTO already dead – trump’s refusal to nominate judges to the wto appellate court and instead choosing to start a trade war killed any legitimacty the wto had for resolving us-china disputes

Their Shaffer ev is overly optimistic – no gurantees that the us or china will actually work together through the wto on things like climate, the card on speculates that the wto *could* be a good mechanism for that

### US-China War

#### Waiving IP protections sends a signal that encourages China to further erode U.S. IP---makes sustaining competitiveness impossible.

Staudt 21 – Current President of the Intellectual Property Owners Association, an international trade association representing members that own, or are interested in, intellectual property (IP) rights

Daniel J. Staudt, “Waiving IP Rights: The Wrong Path to the Right Goals,” IP Watchdog, June 2021, https://www.ipwatchdog.com/2021/06/15/waiving-ip-rights-the-wrong-path-to-the-right-goals/id=134546/

Waiving intellectual property (IP) protections for COVID-19 vaccines will hinder rather than further three meritorious objectives of the current U.S. Presidential Administration: ending the pandemic as soon as possible, leveling the IP playing field with China, and pursuing a worker-centric trade policy. Ensuring equitable, widespread, and successful distribution of vaccines across the globe to meet the challenges of COVID-19, ending the erosion of U.S. IP at the hands of China, and putting Americans back to work are goals that most of us in the U.S. share. An examination of the facts, however, demonstrates that waiving IP rights in the name of COVID-19 relief undermines each of these three U.S. government goals.

Waiver Would Hurt, Not Help

In terms of ending the pandemic as soon as possible, the Washington Post got it right in its May 4 editorial when it stated, “Sharing doses and know-how is better than stripping patents.” It is noteworthy that, during this global debate over whether IP protections should be waived, there have been no instances identified where IP has been used to limit access to vaccines or other COVID-related technologies. In contrast, there are many examples of innovator companies from a wide array of industries who have partnered and shared IP to create testing, vaccines, and therapies to address this pandemic. In fact, IP has enabled this innovation and facilitated this collaboration by providing the incentives that have enabled innovators to devote the resources, technical knowledge, and know-how necessary to counter the pandemic. As a result, our innovative industries have been able to create vaccines and other measures to fight the pandemic. Should an IP waiver be implemented, however, there would not be a stable framework in place to provide confidence to innovators that they can take the necessary risks associated with their inventions and creations as we continue to combat COVID-19. In fact, a waiver would have an immediate chilling effect on continued research and collaborations that are needed, for example, to overcome new variants of the virus, create vaccines for special populations, and develop new tools to help defeat the pandemic and for future vaccine development for other infectious deceases.

Waiver Would Be a Windfall for U.S. Competitors

A second stated goal of the Administration is to become more competitive with countries such as China. To that end, the Senate just passed legislation totaling well over $200 billion that’s designed to strengthen U.S. competitiveness against China. However, to achieve that goal, the United States needs to protect our IP against forced tech-transfer from foreign governments, not give it away. Providing a windfall to U.S. competitors at the same time we are purportedly trying to level the playing field with regards to IP not only makes a farce out of U.S. attempts to “get tough,” but it also sends a dangerous message – that the United States is willing to cave to global pressure and waive Word Trade Organization IP commitments, even if the efficacy of the waiver is not supported by the facts. Unfortunately, we have no reason to think that will be the last of the calls to waive such commitments.

#### Short-term competition key to prevent U.S.-China war.

Beckley & Brands 20 – Associate Professor of Political Science at Tufts University and Jeane Kirkpatrick Visiting Scholar at the American Enterprise Institute; Henry A. Kissinger Distinguished Professor of Global Affairs at the Johns Hopkins University School of Advanced International Studies and a Resident Scholar at the American Enterprise Institute

Michael Beckley, Hal Brands, “Competition With China Could Be Short and Sharp: The Risk of War Is Greatest in the Next Decade,” Foreign Affairs, December 2020, https://www.foreignaffairs.com/articles/united-states/2020-12-17/competition-china-could-be-short-and-sharp

The good news for the United States is that over the long term, competition with China may prove more manageable than many pessimists believe. Americans may one day look back on China the way they now view the Soviet Union—as a dangerous rival whose evident strengths concealed stagnation and vulnerability. The bad news is that over the next five to ten years, the pace of Sino-American rivalry will be torrid, and the prospect of war frighteningly real, as Beijing becomes tempted to lunge for geopolitical gain. The United States still needs a long-term strategy for protracted competition. But first it needs a near-term strategy for navigating the danger zone.

RED FLAGS

Much debate on Washington’s China policy focuses on the dangers China will pose as a peer competitor later this century. Yet the United States actually faces a more pressing and volatile threat: an already powerful but insecure China beset by slowing growth and intensifying hostility abroad.

China has the money and muscle to challenge the United States in key areas. Thanks to decades of rapid growth, China boasts the world’s largest economy (measured by purchasing power parity), trade surplus, financial reserves, navy by number of ships, and conventional missile force. Chinese investments span the globe, and Beijing is pushing for primacy in such strategic technologies as 5G telecommunications and artificial intelligence (AI). Add in four years of disarray in the U.S.-led world order under President Donald Trump, and it is hardly surprising that Beijing is testing the status quo from the South China Sea to the border with India.

Yet China’s window of opportunity may be closing fast. Since 2007, China’s annual economic growth rate has dropped by more than half, and productivity has declined by ten percent. Meanwhile, debt has ballooned eightfold and is on pace to total 335 percent of GDP by the end of 2020. China has little hope of reversing these trends, because it will lose 200 million working-age adults and gain 300 million senior citizens over the next 30 years. And as economic growth falls, the dangers of social and political unrest rise. Chinese leaders know this: President Xi Jinping has given multiple speeches warning about the possibility of a Soviet-style collapse, and Chinese elites are moving their money and children abroad.

Meanwhile, global anti-China sentiment has soared to levels not seen since the 1989 Tiananmen Square massacre. Nearly a dozen countries have suspended or canceled participation in Belt and Road Initiative (BRI) projects. Another 16 countries, including eight of the world’s ten largest economies, have banned or severely restricted use of Huawei products in their 5G networks. India has been turning hard against China since a clash on their shared border killed 20 soldiers in June. Japan has ramped up military spending, turned amphibious ships into aircraft carriers, and strung missile launchers along the Ryukyu Islands near Taiwan. The European Union has labeled China a “systemic rival”; and the United Kingdom, France, and Germany are sending naval patrols to counter Beijing’s expansion in the South China Sea and Indian Ocean. On multiple fronts, China is facing the blowback created by its own behavior.

HISTORY RHYMES

Many people assume that rising revisionists pose the greatest danger to international security. But historically, the most desperate dashes have come from powers that had been on the ascent but grew worried that their time was running short.

World War I is a classic example. Germany’s rising power formed the strategic backdrop to that conflict, but German fears of decline triggered the ultimate decision for war. Russia’s growing military power and mobility menaced Germany’s eastern flank; new French conscription laws were changing the balance in the West; and a tightening Franco-Russian-British entente was leaving Germany surrounded. German leaders ran such catastrophic risks in the July crisis for fear that geopolitical greatness would elude them if they did not act quickly.

The same logic explains imperial Japan’s fatal gamble in 1941, after the U.S. oil embargo and naval rearmament presented Tokyo with a closing window of opportunity to dominate the Asia-Pacific. In the 1970s, Soviet global expansion peaked as Moscow’s military buildup matured and the slowing of the Soviet economy created an impetus to lock in geopolitical gains.

Given that China is currently facing both a grim economic forecast and a tightening strategic encirclement, the next few years may prove particularly turbulent. The United States obviously needs a long-term strategy to compete with China. But it also needs to blunt a potential surge of Chinese aggression and expansion this decade.

The early Cold War offers a useful parallel. At that time, American leaders understood that winning the long-term struggle against the Soviet Union required not losing crucial battles in the short term. The Marshall Plan, unveiled in 1947, was meant to prevent economic collapse in Western Europe, because such a breakdown might allow Moscow to extend its political hegemony over the entire continent. The creation of NATO and rearmament during the Korean War forged a military shield that allowed the West to thrive. Strategic urgency was the prelude to strategic patience: the United States could exploit its lasting economic and political advantages only if it closed off more immediate vulnerabilities.

Today, the United States again needs a danger-zone strategy, which should be based on three principles. First, focus on denying China near-term successes that would radically alter the long-term balance of power. The most pressing dangers are a Chinese conquest of Taiwan and Chinese preeminence in 5G telecommunications networks. Second, rely on tools and partnerships available now or in the near future rather than assets that require years to develop. Third, focus on selectively degrading Chinese power rather than changing Chinese behavior. Seduction and coercion are out; targeted attrition is in. Such an approach entails greater risk. But the United States must act assertively now to prevent more destabilizing spirals of hostility later.

### AT: disease extinction

#### Absolutely no chance of extinction from disease

Adalja 16 [Amesh Adalja, infectious disease physician at the University of Pittsburgh] “Why Hasn't Disease Wiped out the Human Race?” June 17, 2016 (http://www.theatlantic.com/health/archive/2016/06/infectious-diseases-extinction/487514/) - MZhu

But when people ask me if I’m worried about infectious diseases, they’re often not asking about the threat to human lives; they’re asking about the threat to human life. With each outbreak of a headline-grabbing emerging infectious disease comes a fear of extinction itself. The fear envisions a large proportion of humans succumbing to infection, leaving no survivors or so few that the species can’t be sustained. I’m not afraid of this apocalyptic scenario, but I do understand the impulse. Worry about the end is a quintessentially human trait. Thankfully, so is our resilience. For most of mankind’s history, infectious diseases were the existential threat to humanity—and for good reason. They were quite successful at killing people: The 6th century’s Plague of Justinian knocked out an estimated 17 percent of the world’s population; the 14th century Black Death decimated a third of Europe; the 1918 influenza pandemic killed 5 percent of the world; malaria is estimated to have killed half of all humans who have ever lived. Any yet, of course, humanity continued to flourish. Our species’ recent explosion in lifespan is almost exclusively the result of the control of infectious diseases through sanitation, vaccination, and antimicrobial therapies. Only in the modern era, in which many infectious diseases have been tamed in the industrial world, do people have the luxury of death from cancer, heart disease, or stroke in the 8th decade of life. Childhoods are free from watching siblings and friends die from outbreaks of typhoid, scarlet fever, smallpox, measles, and the like. So what would it take for a disease to wipe out humanity now? In Michael Crichton’s The Andromeda Strain, the canonical book in the disease-outbreak genre, an alien microbe threatens the human race with extinction, and humanity’s best minds are marshaled to combat the enemy organism. Fortunately, outside of fiction, there’s no reason to expect alien pathogens to wage war on the human race any time soon, and my analysis suggests that any real-life domestic microbe reaching an extinction level of threat probably is just as unlikely. Any apocalyptic pathogen would need to possess a very special combination of two attributes. First, it would have to be so unfamiliar that no existing therapy or vaccine could be applied to it. Second, it would need to have a high and surreptitious transmissibility before symptoms occur. The first is essential because any microbe from a known class of pathogens would, by definition, have family members that could serve as models for containment and countermeasures. The second would allow the hypothetical disease to spread without being detected by even the most astute clinicians. The three infectious diseases most likely to be considered extinction-level threats in the world today—influenza, HIV, and Ebola—don’t meet these two requirements. Influenza, for instance, despite its well-established ability to kill on a large scale, its contagiousness, and its unrivaled ability to shift and drift away from our vaccines, is still what I would call a “known unknown.” While there are many mysteries about how new flu strains emerge, from at least the time of Hippocrates, humans have been attuned to its risk. And in the modern era, a full-fledged industry of influenza preparedness exists, with effective vaccine strategies and antiviral therapies. HIV, which has killed 39 million people over several decades, is similarly limited due to several factors. Most importantly, HIV’s dependency on blood and body fluid for transmission (similar to Ebola) requires intimate human-to-human contact, which limits contagion. Highly potent antiviral therapy allows most people to live normally with the disease, and a substantial group of the population has genetic mutations that render them impervious to infection in the first place. Lastly, simple prevention strategies such as needle exchange for injection drug users and barrier contraceptives—when available—can curtail transmission risk. Ebola, for many of the same reasons as HIV as well as several others, also falls short of the mark. This is especially due to the fact that it spreads almost exclusively through people with easily recognizable symptoms, plus the taming of its once unfathomable 90 percent mortality rate by simple supportive care. Beyond those three, every other known disease falls short of what seems required to wipe out humans—which is, of course, why we’re still here. And it’s not that diseases are ineffective. On the contrary, diseases’ failure to knock us out is a testament to just how resilient humans are. Part of our evolutionary heritage is our immune system, one of the most complex on the planet, even without the benefit of vaccines or the helping hand of antimicrobial drugs. This system, when viewed at a species level, can adapt to almost any enemy imaginable. Coupled to genetic variations amongst humans—which open up the possibility for a range of advantages, from imperviousness to infection to a tendency for mild symptoms—this adaptability ensures that almost any infectious disease onslaught will leave a large proportion of the population alive to rebuild, in contrast to the fictional Hollywood versions. While the immune system’s role can never be understated, an even more powerful protector is the faculty of consciousness. Humans are not the most prolific, quickly evolving, or strongest organisms on the planet, but as Aristotle identified, humans are the rational animals—and it is this fundamental distinguishing characteristic that allows humans to form abstractions, think in principles, and plan long-range. These capacities, in turn, allow humans to modify, alter, and improve themselves and their environments. Consciousness equips us, at an individual and a species level, to make nature safe for the species through such technological marvels as antibiotics, antivirals, vaccines, and sanitation. When humans began to focus their minds on the problems posed by infectious disease, human life ceased being nasty, brutish, and short. In many ways, human consciousness became infectious diseases’ worthiest adversary.

#### Diseases won’t cause extinction – burnout and geographical isolation check

Consiglio 17 [Dave, Community College Professor of Chemistry and Physics, 12/7/17, “Could a Disease Wipe Out Humans Entirely?”, <https://www.forbes.com/sites/quora/2017/12/07/could-a-disease-wipe-out-humans-entirely/#387c2f308203> Accessed 2/8/28] BBro

What scenarios seem like they should kill everyone but actually won't? Disease. Everyone seems worried about a killer disease, be it HIV or Ebola or Flu or some unknown pathogen. But humans are going to be really hard to wipe out via disease. Why? Well, we have several things going for us: We have a massive population. **We are geographically widespread**. We are capable of eating nearly anything. We are reasonably diverse as a species. **There are geographically** and genetically **isolated** pockets of our **population. Diseases require** a **vector** to spread. Let’s say the perfect disease arose tomorrow: It kills two weeks after you get it, shows no symptoms until the last minute, is really easy to transmit, and we have very little immunity to it. It still doesn’t kill everyone. Native Greenlanders and the people in Antarctica and people on Navy submarines and the few random people who are immune, and park rangers all either never come into contact with an infected person or else are spared by a genetic fluke. We even have the International Space Station as a potential place to hide and wait for the epidemic to die down. In fairness, nearly everyone is dead in short order, but **once** the **disease has run its course, the pathogen** that causes it **is also** likely to be **dead.** The vast majority of pathogens don’t survive for long outside of their hosts. As such, once nearly everyone is dead and the survivors wait a bit, they’re **unlikely to encounter live pathogen**. As an added bonus, the few surviving people include many of the most naturally immune members of the (now mostly dead) population. Now, don’t get me wrong, this scenario would be catastrophic for humanity. 99.9% of us could die in this way. And it’s possible that the remaining humans would be so isolated as to be unable to find one another for the purposes of reproduction. But I doubt it. Humans are nothing if not fecund, and we have those submarines, boats, airplanes, etc. We will eventually come out from hiding, find that special someone, and breed our way out of trouble. It’s why we’re still around as a species - nothing stops us from making more humans.