# 1NC

## 1

#### Interpretation: Debaters must disclose round reports on the 2020-21 NDCA LD wiki for every round they have debated this season. Round reports disclose which positions (AC, NC, K, T, Theory, etc.) were read/gone for in every speech.

#### Violation: screenshot in the doc

Table

Description automatically generated

#### Standards:

#### 1. Level Playing Field – big schools can scout and collect flows but independents are left in the dark so round reports are key to prep - they give an idea of what layers debaters go for so you can best prepare your strategy. Accessibility first and independent voter – it’s an impact multiplier – it’s the only way students continue coming into debate.

#### 2. Strategy -

#### a. small schools - round reports help novices understand the context in which positions are read by good debaters and help with brainstorming potential 1NCs vs affs – helps compensate for kids who can’t afford coaches to prep out affs.

#### b. don’t know what positions you go for which skews my strategy when picking positions because you know mine – ow under reciprocity.

#### Paradigm:

#### Fairness – Debate is a competitive activity governed by rules. You can’t evaluate who did better debating if the round is structurally skewed, so fairness is a gateway to substantive debate.

#### Education – Only portable impact from debate and why schools fund it.

#### DTD – Time spent on theory cant be compensated for, the 1nc was already skewed, and its key to deterring abuse.

#### Prefer Competing interps -

#### 1. reasonability is arbitrary and invites judge intervention.

#### 2. it Causes a race to the bottom where debaters push the limit as to how reasonably abusive, they can be.

#### No RVI’s -

#### 1. Chills some debaters from reading theory against abusive postions.

#### 2. incentivizes theory baiting where you can just bait theory to win.

## 2

#### CP Text: The member nations of the World Trade Organization except for the People’s Republic of China ought to reduce intellectual property protections for medicines.

#### China is geared up to become biotech lead.

CAS 21 [(CAS, a division of the American Chemical Society, partners with R&D organizations globally to provide actionable scientific insights that help them plan, innovate, protect their innovations, and predict how new markets and opportunities will evolve. Leverage our unparalleled content, specialized technology, and unmatched human expertise to customize solutions that will give your organization an information advantage.), “3 reasons biotech is booming in China: How can you capitalize on the growth?”, <https://www.cas.org/resources/blog/3-reasons-biotech-booming-china-how-can-you-capitalize-growth>, July 20, 2021] TDI

3 reasons biotech is booming in China: How can you capitalize on the growth? This year marks the 40th anniversary of China's Reform and Opening Up policy, which was established in 1978. China’s embrace of economic reform and free-market principles has propelled unprecedented business and industry growth since that time, firmly securing its position as the world's second largest economy. In light of the rise of China's economy, a number of global biotech companies—such as Denmark's Novo Nordisk—began to build an early presence there. Building on this foundation, within the past few years biotech has started to grow at an explosive rate in China. In fact, China's biotech industry is anticipated to exceed four percent of GDP by 2020. Why is biotech betting big on China? Here, we explore three factors driving the country's recent biotech boom and what it means for those looking to capitalize on this growth National innovation strategy attracting top talent Ten years ago, a biotech specialist from China may have needed to look for international career opportunities. But today, thriving government programs and a surge of entrepreneurial investments have created more incentive than ever for top talent to establish careers in China. The Chinese government has made it a priority to transform the country from a manufacturing to an innovation-driven economy by developing five-year national strategic plans that set economic and growth goals. The most recent plan, which put special focus on the biotech industry, outlines the development of 10 to 20 biomedicine life-science parks with an output surpassing $1.5 billion by 2020. This is in addition to the 100 life-science parks already established throughout the country, as well as $100 billion of government investments dedicated to innovation. The government's Thousand Talents Plan—which encourages Chinese scientists, academics and entrepreneurs living abroad to return to China—has recruited 7,000 experts since 2008, with 1,400 of them recruited specifically by the life sciences committee for biotech. The government has also heavily invested to enhance the intellectual property environment in China. The State Intellectual Property Office (SIPO), China's patent office, has received additional resources to address the growing volume of patent applications and has implemented an expedited examination process. In 2007, SIPO had 2,672 examiners dedicated to examining patents; by 2017, that number had grown to more than 11,500 (SIPO Annual Reports, 2007 and 2017). SIPO also offers attractive benefits to high-demand patent applications, such as covering filing fees and providing tax incentives and monetary rewards. Beyond the government, Chinese venture capital and private equity funds raised $45 billion for life sciences in two and a half years, which contributed to the development of China's flourishing biotech start-up culture. As a result of all of these factors driving innovation, patent applications have soared—more than 50,000 biotech patents were submitted in 2017, up from less than 20,000 in 2010. Some fields leading this growth are natural products, biologics and bioinformatics. Chinese biotech patent applications Growth in Chinese biotech patent application volume since 2000 Demand for new treatments creating an attractive market According to the United Nations, China's population is ageing more rapidly than that of any other country. This fact, along with changing lifestyles and environmental concerns, is driving increasing rates of critical and chronic illness. For example, 36 percent of the world's lung cancer diagnoses come from China, yet the five-year lung cancer survival rate is currently 17 percent lower than the global average. This market landscape creates surging demand for pioneering medical treatments, and investors are turning to Chinese scientists to develop solutions that could not only be sold in China, but enhance treatment worldwide. Major pharmaceutical companies in the west are taking note as well and considering ways to bolster their presence in China as domestic investors gain market share, with many global leaders opening research centers in China and others coordinating research cooperation pacts with Chinese institutions. Globalized approach to regulations easing market entry In March 2018, the China Food and Drug Administration (CFDA) announced it will merge with other administrative bodies to form a national market supervision administration. As part of the restructuring, a new entity is being created that will focus primarily on medical technologies. This is expected to bring increased efficiency and consistency to regulation of pharmaceuticals and medical devices in China. Further, in April 2018, the government launched initiatives to support generic drug research and development as a means to foster innovation and provide more accessible treatment options to Chinese patients. They include providing research grants, as well as expediting the review and approval process of generic drugs based on name-brand drugs with compulsory licenses. These efforts are the latest in a series of reforms aimed at streamlining China's regulatory process to align with international standards. Last August, for example, the CFDA announced it had joined ICH, a global federation of medicines regulators that seeks to harmonize health technology regulations. It also announced it would allow data from clinical trials conducted outside of China to be admitted as part of regulatory filings, a move that fast-tracks new treatments from the lab to the clinic. Overall, these efforts to streamline China's regulatory processes and align them more closely with those outside of China eases entry into the Chinese market for domestic as well as foreign investors and also make it easier for Chinese firms to market their innovations internationally. These developments, along with the impressive growth rate, clearly demonstrate that China is quickly establishing itself as the eastern hub for biotechnology innovation. Organizations looking for growth opportunities in biotech should certainly have China on their radar. However, a successful strategy for growth within any industry sector in China requires a deep understanding of the market and intellectual property landscape, as well as governmental and cultural factors.

#### **US biotech stocks down now.**

Gatlin 21 [(Allison, Author at Investor's Business Daily “Biotech Stocks Hit A Snag — Why Experts Say The Heyday Isn't Over“, Investor's Business Daily, ), 4-9-2021, https://www.investors.com/news/technology/biotech-stocks-why-they-have-skidded-why-experts-are-not-worried/)] TDI

Regulatory and drug-pricing worries have knocked biotech stocks off their Covid pedestal. After seeing massive gains in 2020 amid the Covid-19 vaccine heyday and hitting a high point in early February, biotech stocks have collectively pulled back 21%. Investors are uneasy after the Federal Trade Commission formed a working group to more deeply scrutinize pharmaceutical mergers. Meanwhile, the Food and Drug Administration has delayed a number of drug approvals, and Sen. Bernie Sanders, I-Vt., introduced sweeping drug-pricing legislation. All of this comes amid a backdrop of rising interest rates.

#### CP solves innovation in every other country BUT reversing Chinese lead is key. They can’t get out of this otherwise the aff has zero solvency.

#### China uses biotech gains for massive bio-military advantages over the US – spurs bio-attacks.

**Kuo 17**, Mercy. “The Great US-China Biotechnology and Artificial Intelligence Race.” The Diplomat, 23 Aug. 2017, thediplomat.com/2017/08/the-great-us-china-biotechnology-and-artificial-intelligence-race/.

Trans-Pacific View author Mercy Kuo regularly engages subject-matter experts, policy practitioners, and strategic thinkers across the globe for their diverse insights into the U.S. Asia policy. This conversation with Eleonore Pauwels – Director of Biology Collectives and Senior Program Associate, Science and Technology Innovation Program at the Wilson Center in Washington D.C. – is the 104th in “The Trans-Pacific View Insight Series.” Explain the motivation behind Chinese investment in U.S. genomics and artificial intelligence (AI). With large public and private investments inland and in the U.S., China plans to become the next AI-Genomics powerhouse, which indicates that these technologies will soon converge in China. China’s ambition is to lead the global market for precision medicine, **which necessitates acquiring strategic tech**nological and human capital in both genomics and AI. And the country excels at this game. A sharp blow in this U.S.-China competition happened in 2013 when BGI purchased Complete Genomics, in California, with the intent to build its own advanced genomic sequencing machines, therefore securing a technological knowhow mainly mastered by U.S. producers. There are significant economic incentives behind China’s heavy investment in the increasing convergence of AI and genomics. This golden combination will drive precision medicine to new heights by developing a more sophisticated understanding of how our genomes function, leading to precise, even personalized, cancer therapeutics and preventive diagnostics, such as liquid biopsies. By one estimate, the liquid biopsy market is expected to be worth $40 billion in 2017. Assess the implications of iCarbonX of Shenzhen’s decision to invest US$100 million in U.S.-company PatientsLikeMe relative to AI and genomic data collection. iCarbonX is a pioneer in AI software that learns to recognize useful relationships between large amounts of individuals’ biological, medical, behavioral and psychological data. Such a data-ecosystem will deliver insights into how an individual’s genome is mutating over time, and therefore critical information about this individual’s susceptibilities to rare, chronic and mental illnesses. In 2017, iCarbonX invested $100 million in PatientsLikeMe, getting a hold over data from the biggest online network of patients with rare and chronic diseases. If successful, this effort could turn into genetic gold, making iCarbonX one of the wealthiest healthcare companies in China and beyond. The risk factor is that iCarbonX is handling more than personal data, but potentially vulnerable data as the company uses a smartphone application, Meum, for customers to consult for health advice. Remember that the Chinese nascent genomics and AI industry relies on cloud computing for genomics data-storage and exchange, creating, in its wake, new vulnerabilities associated with any internet-based technology. This phenomenon has severe implications. How much consideration has been given to privacy and the evolving notion of personal data in this AI-powered health economy? And is our cyberinfrastructure ready to protect such trove of personal health data from hackers and industrial espionage? In this new race, will China and the U.S. have to constantly accelerate their rate of cyber and bio-innovation to be more resilient? Refining our models of genomics data protection will become a critical biosecurity issue. Why is Chinese access to U.S. genomic data a national security concern? **Genomics** and computing research **is inherently dual-use, therefore a strategic advantage in a nation’s security arsenal.** Using AI systems to understand how the functioning of our genomes impacts our health **is of strategic importance for biodefense.** This knowledge will lead to increasing developments at the forefront of medical countermeasures, **including vaccines**, antibiotics, and targeted treatments relying on virus-engineering and microbiome research. Applying deep learning to genomics data-sets could help geneticists learn how to use genome-editing (CRISPR) to efficiently engineer living systems, but also to treat and, even “optimize,” human health, **with potential applications in military enhancements**. A $15 million partnership between a U.S. company, Gingko Bioworks, and DARPA aims to genetically design new probiotics as a protection for soldiers against a variety of stomach bugs and illnesses. China could be using the same deep learning techniques on U.S. genomics data to better comprehend how to develop, patent and manufacture tailored cancer immunotherapies in high demand in the United States. Yet, what if Chinese efforts venture into understanding how to impact key genomics health determinants relevant to the U.S. population? **Gaining access to increasingly large U.S. genomic data-sets gives China a knowledge advantage into leading the next steps in bio-military research.** Could biomedical data be used to develop bioweapons? Explain. Personalized medicine advances mean that personalized bio-attacks are increasingly possible. The combination of AI with biomedical data and genome-editing technologies will help us predict genes most important to particular functions. Such insights will contribute to knowing how a particular disease occurs, how a newly-discovered virus has high transmissibility, but also why certain populations and individuals are more susceptible to it. Combining host susceptibility information with pathogenic targeted design, **malicious actors could engineer pathogens that are tailored to overcome the immune system or the microbiome of specific populations.**

#### Bio-attacks cause extinction – overcomes any conventional defense.

Walsh 19, Bryan. End Times: A Brief Guide to the End of the World. Hachette Books, 2019. (Future Correspondent for Axios, Editor of the Science and Technology Publication OneZero, Former Senior and International Editor at Time Magazine, BA from Princeton University)//Elmer

I’ve lived through disease outbreaks, and in the previous chapter I showed just how unprepared we are to face a widespread pandemic of flu or another new pathogen like SARS. But a deliberate outbreak caused by an engineered pathogen would be far worse. We would face the same agonizing decisions that must be made during a natural pandemic: whether to ban travel from affected regions, how to keep overburdened hospitals working as the rolls of the sick grew, how to accelerate the development and distribution of vaccines and drugs. To that dire list add the terror that would spread once it became clear that the death and disease in our midst was not the random work of nature, but a deliberate act of malice. We’re scared of disease outbreaks and we’re scared of terrorism—put them together and you have a formula for chaos. As deadly and as disruptive as a conventional bioterror incident would be, an attack that employed existing pathogens could only spread so far, limited by the same laws of evolution that circumscribe natural disease outbreaks. But a virus engineered in a lab to break those laws could spread faster and kill quicker than anything that would emerge out of nature. It can be designed to evade medical countermeasures, frustrating doctors’ attempts to diagnose cases and treat patients. If health officials manage to stamp out the outbreak, it could be reintroduced into the public again and again. It could, with the right mix of genetic traits, even wipe us off the planet, making engineered viruses a genuine existential threat. And such an attack may not even be that difficult to carry out. Thanks to advances in biotechnology that have rapidly reduced the skill level and funding needed to perform gene editing and engineering, what might have once required the work of an army of virologists employed by a nation-state could soon be done by a handful of talented and trained individuals. Or maybe just one. When Melinda Gates was asked at the South by Southwest conference in 2018 to identify what she saw as the biggest threat facing the world over the next decade, she didn’t hesitate: “A bioterrorism event. Definitely.”2 She’s far from alone. In 2016, President Obama’s director of national intelligence James Clapper identified CRISPR as a “weapon of mass destruction,” a category usually reserved for known nightmares like nuclear bombs and chemical weapons. A 2018 report from the National Academies of Sciences concluded that biotechnology had rewritten what was possible in creating new weapons, while also increasing the range of people capable of carrying out such attacks.3 That’s a fatal combination, one that plausibly threatens the future of humanity like nothing else. “The existential threat that would be most available for someone, if they felt like doing something, would be a bioweapon,” said Eric Klien, founder of the Lifeboat Foundation, a nonprofit dedicated to helping humanity survive existential risks. “It would not be hard for a small group of people, maybe even just two or three people, to kill a hundred million people using a bioweapon. There are probably a million people currently on the planet who would have the technical knowledge to pull this off. It’s actually surprising that it hasn’t happened yet.”

## 3

#### Despite growing rivalry, US-China economic interdependence strong now. Exchange of tech know-how, collaboration science research, and massive US-China STEM pipeline improving relations – but it can easily collapse.

Hass 21[Ryan Hass (Senior Fellow - Foreign Policy, Center for East Asia Policy Studies, John L. Thornton China Center The Michael H. Armacost Chair Chen-Fu and Cecilia Yen Koo Chair in Taiwan Studies Nonresident Fellow, Paul Tsai China Center, Yale Law School), 8-12-2021, "The “new normal” in US-China relations: Hardening competition and deep interdependence," Brookings, <https://www.brookings.edu/blog/order-from-chaos/2021/08/12/the-new-normal-in-us-china-relations-hardening-competition-and-deep-interdependence/> // belle]

The intensification of U.S.-China competition has captured significant attention in recent years. American attitudes toward China have become more negative during this period, as anger has built over disruptions resulting from the COVID-19 pandemic, Beijing’s trampling of Hong Kong’s autonomy, human rights violations in Xinjiang, and job losses to China. Amidst this focus on great power competition, two broader trends in the U.S.-China relationship have commanded relatively less attention. The first has been the widening gap in America’s and China’s overall national power relative to every other country in the world. The second has been the continuing thick interdependence between the United States and China, even amidst their growing rivalry. Even on economic issues, where rhetoric and actions around decoupling command the most attention, trade and investment data continue to point stubbornly in the direction of deep interdependence. These trends will impact how competition is conducted between the U.S. and China in the coming years. SEPARATING FROM THE PACK As America’s unipolarity in the international system has waned, there has been renewed focus on the role of major powers in the international system, including the European Union, Russia, India, and Japan. Each of these powers has a major population and substantial economic weight or military heft, but as my Brookings colleague Bruce Jones has observed, none have all. Only the United States and China possess all these attributes. The U.S. and China are likely to continue amassing disproportionate weight in the international system going forward. Their growing role in the global economy is fueled largely by both countries’ technology sectors. These two countries have unique traits. These include world-class research expertise, deep capital pools, data abundance, and highly competitive innovation ecosystems. Both are benefitting disproportionately from a clustering effect around technology hubs. For example, of the roughly 4,500 artificial intelligence-involved companies in the world, about half operate in the U.S. and one-third operate in China. According to a widely cited study by PricewaterhouseCoopers, the U.S. and China are set to capture 70% of the $15.7 trillion windfall that AI is expected to add to the global economy by 2030. The United States and China have been reinvesting their economic gains to varying degrees into research and development for new and emerging technologies that will continue to propel them forward. While it is not foregone that the U.S. and China will remain at the frontier of innovation indefinitely, it also is not clear which other countries might displace them or on what timeline. Overall, China’s economy likely will cool in the coming years relative to its blistering pace of growth in recent decades, but it is not likely to collapse. DEEP INTERDEPENDENCE At the same time, bilateral competition between the United States and China also is intensifying. Even so, rising bilateral friction has not – at least not yet – undone the deep interdependencies that have built up between the two powers over decades. In the economic realm, trade and investment ties remain significant, even as both countries continue to take steps to limit vulnerabilities from the other. For example, Chinese regulators have been asserting greater control over when and where Chinese companies raise capital; Beijing’s recent probe of ride-hailing app Didi Chuxing provides but the latest example. China’s top leaders have been emphasizing the need for greater technology “self-sufficiency” and have been pouring billions of dollars of state capital into this drive. Meanwhile, U.S. officials have been seeking to limit American investments from going to Chinese companies linked to the military or surveillance sectors. The Security and Exchange Commission’s scrutiny of initial public offerings for Chinese companies and its focus on ensuring Chinese companies meet American accounting standards could result in some currently listed Chinese companies being removed from U.S. exchanges. Both countries have sought to disentangle supply chains around sensitive technologies with national security, and in the American case, human rights dimensions. U.S. officials have sought to raise awareness of the risks for American firms of doing business in Hong Kong and Xinjiang. Even so, U.S.-China trade and investment ties remain robust. In 2020, China was America’s largest goods trading partner, third largest export market, and largest source of imports. Exports to China supported an estimated 1.2 million jobs in the United States in 2019. Most U.S. companies operating in China report being committed to the China market for the long term. U.S. investment firms have been increasing their positions in China, following a global trend. BlackRock, J.P. Morgan Chase, Goldman Sachs, and Morgan Stanley have all increased their exposure in China, matching similar efforts by UBS, Nomura Holdings, Credit Suisse, and AXA. The Rhodium Group estimates that U.S. investors held $1.1 trillion in equities issued by Chinese companies, and that there was as much as $3.3 trillion in U.S.-China two-way equity and bond holdings at the end of 2020. One leg of the U.S.-China economic relationship that has atrophied in recent years has been China’s flow of investment into the United States. This has largely been a product of tightened capital controls in China, growing Chinese government scrutiny of its companies’ offshore investments, and enhanced U.S. screening of Chinese investments for national security concerns. Another area of U.S.-China interdependence has been knowledge production. As U.S.-China technology expert Matt Sheehan has observed, “With the rise of Chinese talent and capital, the exchange of technological know-how between the United States and China now takes place among private businesses and between individuals.” Leading technology companies in both countries have been building research centers in the other. Alibaba, Baidu, and Tencent have all opened research centers in the United States, just as Apple, Microsoft, Tesla, and other major American technology companies rely upon engineering talent in China. In science collaboration, The Nature Index ranks the joint research between the two countries as the world’s most academically fertile. U.S.-China scientific collaboration grew by more than 10% each year on average between 2015 and 2019. Even following the global spread of COVID-19, American and Chinese experts collaborated more during the past year than over the previous five years combined. This has led to over 100 co-authored articles in leading scientific journals and frequent joint appearances in science-focused workshops and webinars. China also is the largest source of international students in the United States. In the 2019-20 year, there were over 370,000 Chinese students in the U.S., representing 34% of international students in colleges and universities. Up until now, many of the top Chinese students have stayed in the United States following graduation and contributed to America’s scientific, technological, and economic development. It remains to be seen whether this trend will continue.

#### Plan hurts US-China relations – means China goes back on it’s promise to regulate IP violations and draws in U.S. crackdown.

Shape 21 [Steven M. Shape; registered patent attorney and electrical engineer who has represented preeminent technology companies in complex, high-stakes Intellectual Property litigation; 2-19-2021, "IP Law Looms Large Over U.S.-China Relations," No Publication, [https://www.mondaq.com/trademark/1038030/ip-law-looms-large-over-us-china-relations //](https://www.mondaq.com/trademark/1038030/ip-law-looms-large-over-us-china-relations%20//) belle]

The U.S. and China were indisputably the two largest parties in the global trade war that consumed much of the last several years. Particularly between early 2018 and late 2019, it seemed as if one could hardly go a week, if that, without hearing something about tariffs, exports, imports, steel, soybeans, then-President Donald Trump, President Xi Jinping and the like. Accusations regarding violations of Intellectual Property law were among the biggest flashpoints, and ultimately, China announced new regulations concerning IP protection in November 2019 as a conciliatory move. Nearly 14 months later, newly inaugurated President Joe Biden has yet to fully clarify his administration's stance toward China. However, it is inevitable that IP rights and their preservation will factor into negotiations between the two economic giants. A look back at the proposed reforms (and their effects) Reports from CNN at the time claimed that China's prospective IP law reforms focused on making the penalties for IP infringement more strict. It would also put the government's increasingly modernized tech infrastructure to use in the discovery and prosecution of such crimes. Beyond that, the proposal carried few specifics. Although it is unclear whether Beijing's gambit worked as the deciding factor for Washington, it certainly did not fail. The two nations agreed in principle on "Phase One" of a new trade agreement December 12, 2019, per The Washington Post, and formalized the deal about a month later. The U.S. pledged not to impose further tariffs and roll back existing import taxes in return for China's IP reforms and agreement to buy American goods. In the 14 months that followed, so much changed. COVID-19's devastating impact on human life and the global economy made it difficult to gauge the positive effects of the tariff relief or IP reform. A report by the South China Morning Post found that China did not meet its import goal for 2020, with some analysts concluding the Phase One target was unrealistic. On the IP front, a Hong Kong news provider noted that Beijing had drafted some specific guidance to protect pharmaceutical patents, trade secrets and copyrights, but it was unclear how well they were being implemented. Additionally, a January 2021 report by the U.S. Patent and Trademark Office (USPTO) found that Chinese policies which offered subsidies for certain trademark and patent applications helped motivate a glut of fraudulent and bad-faith filings in the last few years. The bigger picture of China's IP law A casual observer or someone just learning of this issue might assume that until recently, China had little or no IP laws on the books. Of course, that is not true. However, there are many factors at play complicating the matter of Chinese IP protection policies. As noted in Harvard Business Review, China is quite strict in certain aspects of IP protection: Beijing allows (and encourages) all businesses to impose non-compete agreements to help protect trade secrets and other IP assets. In addition, according to the National Law Review, two new measures were passed in 2020 specifically to combat bad-faith trademark applications, in addition to the other new guidelines being imposed by the China National Intellectual Property Administration (CNIPA) in accordance with the Phase One agreement. All that said, it would be inaccurate to describe Chinese IP law as thoroughly protective for either domestic or foreign innovators. Along with the aforementioned trademark and patent subsidies, considerable controversy stems from "forced technology transfer" policies. According to the University of Oxford's Business Law Blog, foreign companies looking to do business in China must turn over their technology to local firms or be denied the right to operate within China. This effectively means turning over the blueprints (literal or otherwise) to such technology - which is all but equivalent to surrendering the IP. It creates considerable opportunities for infringement, fraud and corruption. Also, in disputes with foreign firms, some local IP courts still markedly favor domestic organizations. Chinese government representatives often resent such accusations of bias or corruption. In their view, the deals represent friendly agreements between businesses, and courts' decisions are not politically motivated. While Oxford noted that FTT guidelines are not as pervasive now as they were a few years ago, they have yet to disappear altogether. The Biden approach: Not dissimilar, but multilateral If the new U.S. Secretary of the Treasury, Janet Yellen, is to be believed, the Biden administration will not tolerate any signs of lapses in China's IP protections. "We need to take on China's abusive, unfair and illegal practices," Yellen said to the Senate Finance Committee at her confirmation hearings. As reported by Bloomberg, she added, "[China has] been stealing intellectual property and engaging practices that give it an unfair technological advantage, including forced technology transfers. And these . are practices that we're prepared to use the full array of tools to address." Biden had expressed similar sentiments during a December interview with The New York Times. However, he also said that they would work with ally nations to "develop a coherent strategy" for addressing cases of IP infringement and other issues - a stance Yellen echoed before the Senate - instead of taking China on in a unilateral and bellicose manner. This more nuanced approach could yield greater cooperation from Beijing and help repair U.S.-China trade relations, but we will likely not know one way or the other for some time. As we saw with the trade war, conflicts between the U.S. and China can quickly escalate and have ripple effects throughout the world. It would thus be wise for all organizations doing business in China to keep themselves abreast of the country's evolving IP regulations and work with a reliable IP services provider to help establish strong protection for their intangible assets.

#### US-China war leads to extinction.

Graham T. Allison 17. Professor and director of the Harvard Kennedy School’s Belfer Center. “How America and China Could Stumble to War.” The National Interest. 4/12/2017. <https://nationalinterest.org/feature/how-america-china-could-stumble-war-20150?page=0%2C6>

In the years ahead, could a collision between American and Chinese warships in the South China Sea, a drive toward national independence in Taiwan or jockeying between China and Japan over islands on which no one wants to live spark a war between China and the United States that neither wants? It may seem hard to imagine—the consequences would be so obviously disproportionate to any gains either side could hope to achieve. Even a non-nuclear war conducted mostly at sea and in the air could kill thousands of combatants on both sides. Moreover, the economic impact of such a war would be massive. A 2016 RAND study found that, after just one year, American GDP could decline by up to 10 percent and Chinese GDP by as much as 35 percent—setbacks on par with the Great Depression. And if a war did go nuclear, both nations would be utterly destroyed. Chinese and American leaders know they cannot let that happen.¶ Unwise or undesirable, however, does not mean impossible. Wars occur even when leaders are determined to avoid them. Events or actions of others narrow their options, forcing them to make choices that risk war rather than acquiesce to unacceptable alternatives. Athens did not want war with Sparta. Kaiser Wilhelm did not seek war with Britain. Mao initially opposed Kim Il-sung’s attack on South Korea in 1950 for fear of blowback. But events often require leaders to choose between bad and worse risks. And once the military machines are in motion, misunderstandings, miscalculations and entanglements can escalate to a conflict far beyond anyone’s original intent.¶ To better understand these dangers, Washington and Beijing have developed scenarios, simulations and war games. These often begin with an unexpected incident or accident. Individuals assigned to play the hand of China or the United States take it from there. Participants in these exercises are repeatedly surprised to find how often and easily small sparks lead to large wars. Today, there are at least three plausible paths to war between the world’s two greatest powers.¶ IN WAR scenarios, analysts use basic concepts made familiar by the U.S. Forest Service. Arsonists cause only a small fraction of fires. Discarded cigarettes, smoldering campfires, industrial accidents and bolts of lightning are much more common sources. Fortunately, in the forest as well as in relations among nations, most sparks do not ignite a blaze.¶ Background conditions often determine which sparks become fires. While Smokey the Bear’s warning that “only you can prevent forest fires” teaches campers and hikers about sparks, the Forest Service posts additional warnings after long dry spells or periods of extreme heat, occasionally closing high-risk areas. Moreover, it regulates the storage of flammable chemicals, propane tanks and gas depots, becoming increasingly stringent as conditions worsen.¶ In relations between China and the United States today, relevant background conditions include geography, culture and history. “History,” Henry Kissinger observed in his first book, “is the memory of states.” China’s memory is longer than most, with the century of humiliation forming a core part of the country’s identity. Recent military engagements are also part of each state’s living memory. The Korean War and Sino-Soviet border conflict taught Chinese strategists not to back down from more powerful adversaries. Moreover, both the American and Chinese militaries acknowledge that the United States has lost, or at least failed to win, four of the five major wars it has entered since World War II.¶ The most pertinent background conditions, however, are Thucydides’s Trap and the syndromes of rising and ruling powers that China and the United States display in full. Thucydides’s Trap is the severe structural stress caused when a rising power threatens to displace a ruling one. Most contests that fit this pattern have ended badly. Over the past five hundred years, a major rising power has threatened to displace a ruling power sixteen times. In twelve of those, the result was war.¶ The rising power syndrome highlights the upstart’s enhanced sense of itself, its interests, and its entitlement to recognition and respect. The ruling power syndrome is essentially the mirror image: the established power exhibiting an enlarged sense of fear and insecurity as it faces intimations of “decline.” As in sibling rivalries, so too in diplomacy one finds a predictable progression reflected both at the dinner table and at the international conference table. A growing sense of self-importance (“my voice counts”) leads to an expectation of recognition and respect (“listen to what I have to say”) and a demand for increased impact (“I insist”). Understandably, the established power views the rising country’s assertiveness as disrespectful, ungrateful and even provocative or dangerous. Exaggerated self-importance becomes hubris; unreasonable fear, paranoia.¶ ¶ LIKE GASOLINE to a match, accelerants can turn an accidental collision or third-party provocation into war. One cluster of accelerants is captured by what Carl von Clausewitz called the “fog of war.” Extending Thucydides’s insight about war as “an affair of chances,” Clausewitz observed that “war is the realm of uncertainty. Three quarters of the factors on which action in war is based are wrapped in a fog of greater or lesser uncertainty.” This profound uncertainty can lead a commander or policymaker to act aggressively when a fuller set of facts would advise caution, and vice versa.¶ The advent of disruptive weapons that promise “shock and awe” makes the fog and uncertainty even worse. With attacks on command-and-control systems, enemies can paralyze a nation’s military command. In Desert Storm, U.S. forces demonstrated version 1.0 of this option. They destroyed Saddam Hussein’s intelligence and cut communication links to his commanders in the field. Isolated, his forces hunkered down; it was like “shooting fish in a barrel,” U.S. pilots remarked.¶ Antisatellite weapons are one accelerant that military planners expect to play a big role in any U.S.-China conflict. Long a subject of science fiction, such weapons are today a fact of life, running the gamut from kinetic ones that physically destroy their targets to quieter systems that use lasers to jam or “dazzle” satellites, rendering them inoperable. In 2007, China successfully destroyed a weather satellite, and it regularly tests its antisatellite capabilities in less dramatic fashion. Satellites provide a crucial link in almost every U.S. military endeavor, from early warning of ballistic-missile launches and providing imagery and weather forecasts to planning operations. Global positioning satellites put the “precision” in almost all the military’s precision-guided munitions and allow ships, planes and ground units to know where they are on the battlefield. The United States depends on this technology more than any of its competitors, making it a perfect target for Chinese military planners.¶ ¶ Cyberspace provides even more opportunities for disruptive technological transformations that could provide a decisive advantage, on the one hand, but might also risk uncontrolled escalation, on the other. The details of offensive cyberweapons remain heavily classified and are constantly evolving. But the public has seen glimpses of them in some cases, such as America’s cyberattack against Iran’s nuclear program or its “left-of-launch” attacks on North Korea’s missile tests. America’s primary cyberspace organizations, the National Security Agency and U.S. Cyber Command, as well as their Chinese counterparts, can now use cyberweapons to silently shut down military networks and critical civilian infrastructure like power grids. Moreover, by employing proxies and assembling an international web of compromised computers, they can disguise the origins of a cyber-operation, slowing the victim’s ability to identify the attacker.¶ Like antisatellite measures, cyberweapons could create a decisive advantage in battle by disrupting the command-and-control and targeting information on which modern militaries depend—and without bloodshed. This presents a dangerous paradox: the very action that attackers believe will tamp down conflict can appear reckless and provocative to the victims. Similarly, cyberattacks that disrupt communication would intensify the fog of war, creating confusion that multiplies the chances of miscalculation.¶ While both the United States and China now have nuclear arsenals that could survive the other’s first strike and still allow for retaliation, neither can be sure its cyber arsenals could withstand a serious cyber assault. For example, a large-scale Chinese cyberattack against the U.S. military’s networks could temporarily cripple Washington’s ability to respond in kind, or even to operate some of its critical command-and-control and surveillance systems. This creates a dangerous use-it-or-lose-it dynamic in which each side has an incentive to attack key links in the other’s computer networks before their capabilities are disabled.¶ Compared with the bluntest instruments of war, especially nuclear bombs, cyberweapons seem to offer the promise of subtlety and precision. But this promise is illusory. Increased connectivity among systems and devices creates a domino effect. Unable to determine how the hacking of one system may affect others, attackers would find it difficult to narrowly tailor the effects of their operation and avoid unintended escalation. In 2016, 180,000 Internet-connected industrial control systems were operating around the world. Along with the proliferation of the “Internet of Things,” which encompasses some ten billion devices worldwide, the number of enticing targets is growing rapidly.¶ Another accelerant might involve compromising the confidentiality of sensitive networks. Some are obvious, such as those that operate nuclear command and control. Each side, however, may perceive other actions quite differently. Take China’s “Great Firewall,” a collection of hardware and software that enables Beijing to monitor and block vast segments of online content. Washington could disable a system essential to the Great Firewall, intending it as a modest, private warning. But for Chinese leaders who regard the ability to control citizens’ access to information as vital, the operation could be misconstrued as the tip of a spear aimed at regime change.¶ Given these background conditions, potential sparks can be frighteningly mundane. Escalation can occur rapidly. The following three scenarios show just how easily the United States and China can stumble into a war that each side hopes to avoid.¶ ¶ CURRENTLY, AMERICAN and allied warships and aircraft are operating in greater proximity to their Chinese counterparts than ever before. U.S. Navy guided-missile destroyers periodically conduct freedom-of-navigation operations near Chinese-controlled islands in the disputed waters of the South China Sea.¶ Suppose that during routine operations an American destroyer passes near Mischief Reef, one of the newly constructed islands where China has built runways for aircraft and installed air and missile defenses. As the ship nears the contested site, Chinese coast guard vessels harass the destroyer, just as they did during the USS Cowpens incident in 2013. Unlike that encounter, however, the U.S. destroyer is unable to swerve in time. It collides with a Chinese ship and sinks it, killing all on board.¶ ¶ The Chinese government now has three options. The dovish course would be to avoid escalation by allowing the American destroyer to leave the area and to protest its actions through diplomatic channels. At the other end of the spectrum, it could adopt an eye-for-an-eye approach and sink the destroyer using aircraft or missiles stationed on Mischief Reef. By refusing to be the “chicken,” while also not wanting to escalate, Beijing could opt for what it believes is a middle course. As the U.S. destroyer attempts to leave the area, a PLA Navy cruiser blocks its way, insisting that the destroyer entered Chinese territorial waters and demanding that its crew surrender and face justice for the deaths of the coast-guard personnel.¶ China believes it is deescalating the situation by allowing for a diplomatic solution, akin to the deal that permitted an American crew to go free after a crash landing near Hainan Island sixteen years ago. The background conditions have changed since that incident. From a U.S. perspective, China’s reckless harassment of the destroyer caused the collision in the first place. China’s attempt to arrest American sailors in international waters would undermine the principles of the law of the sea. Surrendering would have far-reaching repercussions: if the U.S. military will not stand up to China to defend operations conducted by its own navy, what message does that send to America’s allies, including Japan and the Philippines?¶ Not willing to undermine its credibility by surrendering, the destroyer could simply sink the Chinese cruiser blocking its path. Alternatively, to avoid further bloodshed and to show a degree of sensitivity to the nationalistic pressures Chinese leaders face at home, the United States could use a show of force to get the cruiser to back down peacefully. U.S. Pacific Command in Hawaii, in consultation with leaders in Washington, could order nearby aircraft to fly to the area, send an aircraft carrier stationed in Japan toward the South China Sea, and forward-deploy B-2 bombers to Guam. American officials believe these actions will signal their seriousness without risking any further escalation.¶ Events look different to Beijing, especially amid the fog of war. As China sees it, the United States has already sunk a Chinese vessel. Now scores of American aircraft are aloft, threatening attacks on the Chinese cruiser, other naval vessels, or military installations on nearby islands. Mindful of public opinion, Chinese leaders are especially conscious that any further bloodshed inflicted by the United States would force them to retaliate aggressively.¶ But events are running beyond Beijing’s control. As U.S. fighter jets rush to the scene to assist the stranded destroyer, a Chinese antiaircraft battery panics and fires on the oncoming aircraft. The U.S. aircraft take desperate evasive action, and the destroyer begins firing on Chinese antiaircraft sites on the island. Under attack, the Chinese commander on the island bombards the destroyer with antiship missiles. The missiles hit their intended target, killing hundreds of American sailors and sinking the ship. Those who escape are now stranded in small lifeboats.¶ Chinese leaders are desperate to avoid a full-scale war with the United States, but also cannot admit that their chain of command broke down. They claim their actions were a proportionate and defensive response because the American destroyer was the aggressor. Officials in Washington are stunned that China has sunk a $3 billion vessel and killed hundreds of American sailors. Though wary of going to war with China, those in the Situation Room cannot back down: video of the ship’s wreckage and stranded U.S. sailors on cable news and social media has made that impossible. Many in Congress are calling on the administration to authorize war plans based on the doctrine formerly named Air-Sea Battle, which calls for massive air strikes against missile and radar systems on the Chinese mainland. Realizing that attacks on China’s mainland would trigger war, the president authorizes Pacific Command to instead destroy China’s military bases on disputed islands in the South China Sea. The president reasons that this is a proportionate response, since these islands were directly responsible for the sinking of the destroyer. Furthermore, eliminating these military bases will allow U.S. ships to rescue the sailors stranded nearby. Most important, such an action would target only China’s artificial islands, leaving its mainland untouched.¶ President Xi Jinping and other Chinese officials do not make this distinction. For years they have told the public that China has undisputed sovereignty over these islands. They are an integral part of China proper, and America has just attacked them. (Americans who scoff should recall that the Japanese attack on Pearl Harbor struck neither the mainland nor even a U.S. state, yet still rallied a nation to war.) Many in China are demanding that Xi order the PLA to destroy U.S. military bases in Guam, Japan and elsewhere in the Pacific. Some want China to attack the United States itself. No one is calling for China to exercise restraint. As millions of its citizens’ social-media postings are reminding the government, after its century of humiliation at the hands of sovereign powers, the ruling Communist Party has promised: “never again.”¶ Still, President Xi clings to the hope that war can be avoided, an impossibility if China begins attacking U.S. military bases in Guam or Japan, killing soldiers and civilians and triggering retaliatory attacks on the Chinese mainland. Seeking a proportionate response to the U.S. attack on China’s island bases, Xi instead approves an alternative plan: using lasers, electronic and kinetic weapons to destroy or disable all U.S. military satellites in orbit above the crisis area, and using cyberattacks to cripple American command-and-control systems throughout the Asia-Pacific. The goal is to deescalate: Xi hopes that the United States will be shocked into backing down.¶ But from the American perspective, these “blinding” attacks are indistinguishable from the first stage of a coordinated attack on the U.S. aircraft carrier and its strike group sailing from Japan—an event for which the PLA has spent decades developing its “carrier-killer” antiship ballistic missiles. The ninety-thousand-ton carrier, a floating city of 5,500 sailors that the United States describes as sovereign American territory, is simply too big to lose. The president is not willing to take the risk. On the advice of the Joint Chiefs of Staff, the president reluctantly approves the only plan ready on short notice that has a chance of saving the carrier: a war plan based on Air-Sea Battle.¶ Using those assets still operational after the Chinese attack, the United States military begins destroying China’s “kill chains,” the various satellite and surveillance systems that allow Beijing to accurately target American carriers with its antiship missiles. It also launches massive cruise missile and stealth bomber attacks on PLA missile sites and air bases on the Chinese mainland, which could at any moment be used to sink U.S. vessels anywhere within the first island chain.¶ The attacks provoke exactly what they intended to avoid. Its mainland now under attack, and the targeting systems needed to operate China’s antiship weapons about to be lost, China must use them or lose them. Xi authorizes attacks on all U.S. warships within range, including the carrier group. American aircraft and naval escorts intercept Chinese bombers and fighter jets flying to the carrier, but a swarm of DF-21D ballistic missiles—the so-called carrier killers—prove too much to handle. Enough reach their target to sink the carrier, killing most of the 5,500 sailors on board—far more than died during Pearl Harbor. The dynamics of playing chicken with cyber and space weapons over the South China Sea has transformed a tiny spark into a roaring fire.¶ ¶ IF TAIWAN were an independent nation, it would be among the most successful countries in the world. Its hardworking population of twenty-three million has developed a market economy twice the size of the Philippines, Thailand or Vietnam. Although many in Taiwan want independence, China views it as a province. Beijing is prepared to do whatever it takes to keep Taipei from asserting its sovereignty. No other country has been prepared to fight China over the matter.¶ Suppose, however, that the Chinese government were to substantially increase repression at home, including in Hong Kong, where China promised to maintain considerable autonomy and freedom when Britain returned control of the city in 1997. Enraged that the Chinese government is backtracking on its promises, residents of Hong Kong take to the streets to demand that Beijing uphold its commitment to “One Country, Two Systems.” As the protests drag on for weeks with no resolution in sight, Xi orders the military to do what it did in Tiananmen Square in 1989: crush the protests.¶ The ensuing violence shocks the Taiwanese, particularly the younger generation. Pro-independence and anti-Beijing sentiment soars. In this atmosphere, the Taiwanese president is emboldened to ramp up rhetoric emphasizing her people’s hard-won rights and democracy. Her political allies go further, insisting that what has occurred in Hong Kong proves that Taiwan can never guarantee its citizens’ freedom without becoming a sovereign, independent country. To signal disapproval of Chinese regression in Hong Kong, the American president pointedly announces his respect for the Taiwanese president’s strong stance and declares that the 1979 Taiwan Relations Act fully commits the United States to defend Taiwan against a Chinese invasion.¶ This is a major break from the long-standing U.S. policy of “strategic ambiguity” on the issue, and the Taiwanese president interprets it as tacit endorsement of a move toward independence. In an interview with the New York Times , she announces that Taiwan will apply for full membership to the UN (a move that China has long opposed) and rejects the so-called 1992 Consensus, under which both parties had agreed to the One-China concept while allowing for differing interpretations of what it actually meant. To punish Taiwan’s insubordination and scare it into backing down, China conducts an enhanced version of the Third Taiwan Strait Crisis by barraging Taiwanese waters with “tests” of ballistic and cruise missiles, severely interrupting the commercial shipping that constitutes the island’s lifeline to the world. When Taipei still refuses to withdraw its membership application, China uses other weapons, including mine-laying drones, to further disrupt shipping into and out of Taiwan.¶ As a small island nation, Taiwan imports 70 percent of its food and most of its natural resources, including energy. A sustained blockade would grind its economy to a halt and cause large-scale food shortages. Despite opposition to Taiwan’s application to join the United Nations, the United States feels obliged to prevent its strangulation. Many pro-Taiwan members of Congress are demanding that the White House send aircraft carriers to Taiwan’s aid, just as Bill Clinton did during the 1995–96 crisis. But the administration knows that China’s antiship ballistic missiles would now pose a serious threat to any U.S. carriers moving into the area, and the American public has little stomach for another war.¶ Instead, U.S. Pacific Command offers to escort commercial shipping through the affected seas, a gesture of support but not of willingness to fight. The escort campaign puts U.S. warships at risk of being sunk by the Chinese missile barrage, either deliberately or accidentally—an event that could instantly kill more than one thousand Americans and spark calls for retaliation. In this scenario, a Chinese antiship missile—ostensibly fired as part of ongoing test barrages—sinks the USS John P. Murtha , an amphibious transport dock ship acting as an escort to civilian shipping. All of the nearly eight hundred sailors and marines aboard are killed—more than the United States lost in the first year of the Iraq War.¶ China insists that the sinking was accidental; the Murtha merely got in the way of a missile fired at a random patch of ocean. It reminds Washington that America accidently bombed China’s embassy in Belgrade in 1999. But in Washington, the secretary of defense and the chairman of the joint chiefs urge the president not to be deceived by this explanation. Instead they urge him to authorize the Air-Sea Battle plan to strike PLA antiship missile-launch sites on the mainland.¶ Confronted with the sinking of the Murtha, the president accedes to pressure from military and political advisers, and agrees to preemptively strike antiship and other ballistic-missile systems on the Chinese mainland. Because China’s conventional and nuclear missiles are kept in the same locations, and their command-and-control systems are intertwined, Beijing mistakenly believes the United States is trying to eliminate its nuclear arsenal in a surprise first strike. In a desperate attempt to “deescalate by escalating”—an Orwellian doctrine that is nevertheless a pillar of Russian military strategy—China fires one of its land-based, nuclear-tipped ballistic missiles into an empty tract of ocean south of Okinawa. The nuclear threshold has been crossed. And while no lives have been lost in the strike, it is but a short step from here to all-out nuclear war.¶ ¶ THE SPARK to a Sino-American clash need not initially involve American or Chinese military forces. Instead, it might result from a confrontation with or between third-party allies. Such a scenario nearly became reality in 2010, when North Korea sank the South Korean warship Cheonan, killing forty-six South Korean sailors. China supported North Korea’s denial of involvement. Seoul, meanwhile, insisted that Pyongyang be held accountable. Ultimately, the two Koreas and their allies stepped back from the brink. But with a new set of background conditions and accelerants today, it is not clear that it would be so easy to avoid war, especially if the third parties involved were less inured to the sort of slow, grinding tensions that the Korean Peninsula has endured for decades.¶ Besides South Korea, the other major U.S. ally in China’s immediate vicinity is Japan, a country with a post–World War II history of pacifism, but whose politics have become increasingly militaristic in recent years. Conservative Japanese politicians have spoken ever more stridently about revising the pacifist constitution imposed on their country by the United States. They have also been chafing against Chinese claims of sovereignty in the East and South China Seas. In a crisis involving its historical rival Beijing, any steps Tokyo takes would certainly be shaped by these memories, and by the Japanese government’s shifting attitude toward military force.¶ A likely flashpoint is the Senkaku Islands (known in China as the Diaoyu Islands), located near valuable fishing grounds, trade routes and potential oil reserves in the East China Sea. The United States controlled the islands after World War II, before returning them to Japan in the early 1970s. That same decade, China began claiming sovereignty over the islands. Chinese ships regularly pass through these waters, raising tensions between Beijing and Tokyo and risking a collision that could set off a chain reaction.¶ Consider a scenario that provided the story line for a recent war game designed by the RAND Corporation. A group of Japanese ultranationalists set sail for the Senkakus in small civilian watercraft. On social media, they explain that they are headed for Kuba Jima, one of the smaller islands, which they intend to claim and occupy on behalf of Japan. They land and begin building unidentified structures. Taking a page out of the Chinese playbook, they live stream their activities for the world to see. China reacts swiftly, its coast guard arriving within hours with officers who arrest the Japanese dissidents and take them back to the Chinese mainland for trial. Does Japan allow them to face justice in a Chinese court? It could. Instead, rather than lose face, Japan dispatches some of its own coast-guard vessels to intercept the ship carrying the ultranationalists and prevent them from being taken to China.¶ A pileup ensues as both the PLA Navy and the Japan Maritime Self-Defense Force deploy warships and fighter planes to the area. Neither side backs down. To make matters worse, some of the Japanese vessels land amphibious troops to occupy Kuba Jima, doubling down on the nationalists’ actions. A skirmish has become a military confrontation. In an urgent call, the Japanese prime minister reminds the U.S. president that Tokyo expects Washington to uphold the seven-decade-old mutual defense treaty, noting that senior officials have repeatedly confirmed that America’s commitment applies to the Senkakus.¶ As the standoff enters its third day, the president and his National Security Council must decide: Does the United States wholeheartedly respond to Japan’s appeal, putting air power over the disputed island to protect the Japanese troops now on the ground there? Or is there a more restrained course that will satisfy the Japanese without antagonizing China and further escalating the tense naval standoff? The president opts for the latter, directing the Japan-based carrier strike group to patrol outside the range of the PLA’s land-based carrier-killer missiles, but keeping aircraft and submarines close enough to aid Japanese vessels and territory if things get ugly.¶ They do. The next morning, a Chinese destroyer collides with a Japanese fishing boat in the crowded waters off the Senkakus, and soon fighter jets from both sides are provocatively buzzing their opponent’s warships. The standoff erupts into a brief, bloody naval battle as a Japanese captain, fearing for his ship’s safety, downs one of the low-flying Chinese fighters, and the PLA Navy warships, in return, sink his vessel.¶ ¶ Both sides are at the edge of war at this point, and so is the United States, which is in a position to sink Chinese vessels with its hidden attack submarines or to send its carrier’s air wing into action. At this juncture, however, before the next decision has been made, something unexpected happens. All communications between Japanese forces on and around the Senkakus and their headquarters go dark.¶ A cyberattack has severely disrupted one of the Japanese military’s command-and-control systems. The United States and Japan immediately blame China. The attacker has even left the telltale signs of the PLA’s offensive hacking unit. There is little hesitation in Washington or at U.S. Pacific Command about what to do next. To prevent the Japanese naval force from being annihilated while it is incommunicado, U.S. submarines sink three PLA Navy warships off the Senkakus with torpedoes. China, Japan and the United States have now fired their opening shots in a three-nation war.¶ But what if it was not the PLA that launched the cyberattack after all? What if it was a carefully timed false-flag operation by Russia, seeking to draw the United States and China into a conflict in order to distract Washington from its wrestling match with Moscow over Ukraine? By the time intelligence agencies around the world learn the truth, it will be too late. The Kremlin has played its hand brilliantly.¶ From the Senkakus, the war zone spreads as China attacks more Japanese vessels elsewhere in the East China Sea. Tokyo is desperate for the United States to commit its carrier strike group to the fight. If Washington makes that call, the same point of no return may well be crossed as in the collision-at-sea scenario: the destruction of one of the crown jewels of the U.S. Navy and the loss of life of all aboard could be the tragedy that the U.S. administration is forced to avenge with widening attacks on Chinese forces in a full-scale Pacific war.¶ WAR BETWEEN the United States and China is not inevitable, but it is certainly possible. Indeed, as these scenarios illustrate, the underlying stress created by China’s disruptive rise creates conditions in which accidental, otherwise inconsequential events could trigger a large-scale conflict. That outcome is not preordained: out of the sixteen cases of Thucydides’s Trap over the last five hundred years, war was averted four times. But avoiding war will require statecraft as subtle as that of the British in dealing with a rising America a century ago, or the wise men that crafted a Cold War strategy to meet the Soviet Union’s surge without bombs or bullets. Whether Chinese and American leaders can rise to this challenge is an open question. What is certain is that the fate of the world rests upon the answer.

#### Extinction – nuke war fallout creates Ice Age and mass starvation.

Steven **Starr 15**. “Nuclear War: An Unrecognized Mass Extinction Event Waiting To Happen.” Ratical. March 2015. <https://ratical.org/radiation/NuclearExtinction/StevenStarr022815.html> TG

A war fought with 21st century strategic nuclear weapons would be more than just a great catastrophe in human history. If we allow it to happen, such a war would be a mass extinction event that [ends human history](https://ratical.org/radiation/NuclearExtinction/StarrNuclearWinterOct09.pdf). There is a profound difference between extinction and “an unprecedented disaster,” or even “the end of civilization,” because even after such an immense catastrophe, human life would go on. But extinction, by definition, is an event of utter finality, and a nuclear war that could cause human extinction should really be considered as the ultimate criminal act. It certainly would be the crime to end all crimes. The world’s leading climatologists now tell us that nuclear war threatens our continued existence as a species. Their studies predict that a large nuclear war, especially one fought with strategic nuclear weapons, would create a post-war environment in which for many years it would be too cold and dark to even grow food. Their findings make it clear that not only humans, but most large animals and many other forms of complex life would likely vanish forever in a nuclear darkness of our own making. The environmental consequences of nuclear war would attack the ecological support systems of life at every level. Radioactive fallout produced not only by nuclear bombs, but also by the destruction of nuclear power plants and their spent fuel pools, would poison the biosphere. Millions of tons of smoke would act to [destroy Earth’s protective ozone layer](https://www2.ucar.edu/atmosnews/just-published/3995/nuclear-war-and-ultraviolet-radiation) and block most sunlight from reaching Earth’s surface, creating Ice Age weather conditions that would last for decades. Yet the political and military leaders who control nuclear weapons strictly avoid any direct public discussion of the consequences of nuclear war. They do so by arguing that nuclear weapons are not intended to be used, but only to deter. Remarkably, the leaders of the Nuclear Weapon States have chosen to ignore the authoritative, long-standing scientific research done by the climatologists, research that predicts virtually any nuclear war, fought with even a fraction of the operational and deployed nuclear arsenals, will leave the Earth essentially uninhabitable.

## 4

#### CP Text: the United States should

#### -invest $25 billion into 25 production lines dedicated solely to COVID-19 vaccines to boost global vaccine production managed by the Biomedical Advanced Research and Development Authority.

#### -distribute 8 billion doses of COVID vaccines using an equitable distribution framework prioritizing developing countries in the Global South.

#### The CP solves the entirety of the case and does it faster.

Stankiewicz 21 Mike Stankiewicz 5-6-2021"Opinion: For just $25 billion, the U.S. could jump-start a project to quickly vaccinate the entire world against COVID" <https://www.marketwatch.com/story/for-just-25-billion-the-u-s-could-jump-start-a-project-to-quickly-vaccinate-the-entire-world-against-covid-11614898552> (a press officer in Public Citizen's communication's department, where he focuses on legislative policy and health-orientated advocacy)//Elmer

Despite wealthy countries such as the U.S. ramping up COVID-19 vaccination efforts, **it** still **may** **take years to vaccinate the world**, especially poorer countries, and the economic and humanitarian impacts could be devastating. But **an injection of** **just $25 billion** **into global vaccine production efforts by the U.S.** government **could save millions of lives** and help prevent economic disaster. The most up-to-date numbers paint incredibly different futures between wealthy and low-income countries. At the current rate of vaccination, analysts predict that developing countries, including almost all of Southeast Asia, may not reach meaningful vaccine coverage until 2023. Comparatively, President Joe Biden has promised that the U.S. will have enough vaccine doses to inoculate every adult within the next three months. Increased fatalities And as wealthy countries such as the U.S. are starting to see lower death, transmission and hospitalization rates, low-income countries are experiencing increased hardship and fatalities. Countries such as Hungry are being forced to tighten restrictions as infection rates increase, and deaths in Africa have spiked by 40% in the past month, according to the World Health Organization (WHO). No country can be left behind in this global pandemic, and the U.S. is in a unique position to make sure every country gets the ample amount of vaccines they need. **Public Citizen research has found that just a $25 billion investment in COVID-19 vaccine production by the U.S. government would produce enough vaccine for developing countries, potentially shaving years from the global pandemic**. Public Citizen estimates that **8 billion doses of** National Institutes of Health-**Moderna MRNA**, +1.98% vaccine can be **produced** **for** just over **$3 per dose**. To bolster production and supply the necessary 8 billion doses, it would take **$1.9 billion to fund** the necessary **25 production lines**. Another **$19 billion** would pay **for materials and labor**, and **$3 billion** would **compensate** **Moderna** **for making technology available to manufacturers** in other countries. An additional $500 million would cover costs to staff and run **a rapid-response federal program that provides technical assistance and facilitates technology transfer to manufacturers and works with the WHO’s technology hub.** In total, vaccinating the world would cost less than 1.4% the total of Biden’s $1.9 trillion COVID relief plan. But such a program also needs to be properly managed to be successful. To help facilitate these efforts, the Biden administration should also **designate** the government’s Biomedical Advanced Research and Development Authority (**BARDA**) **to lead** the world-wide **vaccine manufacturing effort**. BARDA has the **necessary experience to coordinate** **an initiative of this scale** with the WHO, building on its partnership to build pandemic flu manufacturing capacity in developing countries after the bird-flu scare of 2006. Widespread vaccines would help U.S. economy These efforts would dramatically increase access to vaccines in developing countries and speed up global vaccination by years, saving countless lives. But allowing the current vaccine supply crisis to continue is not just inhumane, it is also not in our own economic interest to do so.

#### Unilateral US action is necessary to combat Chinese and Russian vaccine diplomacy – they’re establishing spheres of influence because of few vaccines in developing countries – collapses the LIO.

Carman and Carl 21. [(Ezequiel Carman is an Argentine lawyer and global health and trade policy consultant. Previously, he served as a legal advisor to the Ministry of Justice of Buenos Aires, an assistant professor of international public law at the Universidad Católica Argentina, and a research assistant at the O’Neill Institute for National and Global Health Law. Joseph Carl is a graduate of Liberty University, where he studied international relations and strategic international studies. He has worked for the U.S. Department of State and the Heritage Foundation) “A U.S. vaccine diplomacy strategy for Latin America and the Caribbean,” The Global Americans, June 15, 2021. <https://theglobalamericans.org/2021/06/a-u-s-vaccine-diplomacy-strategy-for-latin-america-and-the-caribbean/>] TDI

Once again, history seems to be repeating itself. The United States, along with the world’s other rich and mostly Western countries, continue to be accused of **hoarding medical supplies**, having purchased one billion surplus vaccine doses (more than is required to vaccinate their citizens). In their absence, China—and, to a lesser extent, Russia—have rushed to **take advantage of the vaccine gap** in the Global South, particularly in Latin America and the Caribbean. A lack of leadership from Washington in sharing vaccines and their intellectual property (IP) earlier in the pandemic has allowed its **geopolitical competitors to take advantage** of Latin America’s desperate need to acquire scarce vaccines. Although the region represents only eight percent of the global population, it has experienced nearly one-third of all COVID-19 deaths. Historical precedent demonstrates this is not the first time that Washington’s international moral standing has been damaged during a global health crisis, due to the lack of political will to share lifesaving drugs and other vital resources. However, this time around, unlike in such past episodes, there will be concrete geopolitical consequences to Washington’s inaction. In recent years, the U.S. has **lost significant political and economic influence** among its southern neighbors; without swift remedial action, its **geopolitical rivals may cement such losses through their campaigns of vaccine diplomacy.** To rebuild its influence in the region, Washington will need to muster the political will to increase Latin America and the Caribbean’s access to vaccines and develop a sound **strategy for its own vaccine diplomacy**. Already, some countries in the region have been sufficiently strong-armed by other global powers, the implications of which could be **damaging for U.S. interests**. As the world transitions into the next stage of the pandemic, those nations that continue to be most ravaged by COVID-19 will likely continue to remember which countries provided them with aid and succor in their time of need. History repeats itself In 1981, the first cases of acquired immunodeficiency syndrome (AIDS) were reported; the following decade was defined by a devastating global AIDS epidemic (which would eventually be recognized as a pandemic). Analogous to how Latin America and the Caribbean have borne disproportionately the burden of COVID-19, Africa was hit hardest by the AIDS epidemic. Many parallels can be drawn between the international handlings of both the COVID-19 and AIDS pandemics. By the late 1980s, once antiretroviral therapies (ARV) were approved by the U.S. Food and Drug Administration (FDA), AIDS deaths in the U.S. began to decline immediately. Nevertheless, high levels of AIDS-related deaths in Africa continued for another decade. Africa’s enduring fight against AIDS was largely due to the cost of ARVs, which, at the time, were priced at USD $10,000 per person annually—completely out of reach for most developing countries. Pharmaceutical companies argued that the drug’s high selling price was necessary to procure a return on its investment in the research and development (R&D) of the ARV, and that pricing the drugs at a marginal cost would maximize consumer surplus while also halting future development in the industry. When pricing a drug, a pharmaceutical company needs to factor-in several costs: 1) the cost of R&D for drugs that never enter the market; 2) clinical trials necessary to comply with regulatory requirements; 3) and the marketing cost of promoting the new drug. While the original price of the patented ARV was USD $10,000 per patient per year, the price of the generic version, manufactured by the Indian pharmaceutical company Cipla, was only USD $1.00 per day. During the AIDS pandemic, since many developing countries were members of the World Trade Organization (WTO), they were forbidden from importing generic pharmaceutical products because in order to maintain compliance with regulations imposed by the Trade Related Aspects of Intellectual Property (TRIPS) agreement. Western pharmaceutical companies—the owners of the IP rights for the medications—blocked access to generic ARV drugs out of fear that the importation of these generic alternatives would ultimately threaten their net profitization. Despite the protests of the pharmaceutical industry, India and South Africa continued to compete with and defy the U.S. and the WTO (a body in which powerful industrialized economies—those of the U.S., Europe, and Japan—wield disproportionate influence). Drug companies eventually sued to keep lifesaving therapies out of the hands of dying AIDS-sufferers in Africa, a state of affairs that engendered a forceful reaction from international activists. After years of political pressure, Washington was forced to yield, eventually pushing for the relaxation of stringent IP protections for ARVs, making generic versions of the drugs more accessible and affordable. Despite its eventual concession, the perception that the U.S. had fought bitterly to prioritize pharmaceutical company profits over human lives in the Global South only helped bolster negative narratives surrounding the Western superpower. However, unlike the unipolarity that characterized the 1990s and early 2000s, the U.S. is no longer the only global superpower, and the humanitarian decisions it makes now—during a new global health crisis—have the potential to be hugely consequential for the country’s influence and image. Similar to its trajectory at the height of the AIDS crisis, Washington only recently voiced its desire to back the WTO patent waiver proposal, having come under tremendous international pressure. Granted, the U.S. backed a patent waiver for COVID-19 vaccines much faster than it did for ARVs in the 1980s. However, having been presented with a rare opportunity to make amends for past moral missteps—by eliminating vaccine IP protections to ensure that affordable, generic versions of COVID-19 vaccines could be manufactured en masse around the world—the U.S. once again hesitated, limiting opportunities for developing nations to recover from the pandemic and again amplifying criticisms of the United States. Backed by over 100 developing countries, India and South Africa are once again leading the current fight to eliminate IP protections. India and South Africa filed a waiver with the WTO requesting a temporary suspension of patent obligations under TRIPS (Sections 1, 4, 5, and 7 of Part II) so that developing countries can access vaccines in a timely manner. The intent of this effort is to boost domestic manufacturing capacity by facilitating the widespread production of generic versions of COVID-19 vaccines, evening the odds with respect to global vaccine procurement and accessibility. The waiver would also allow developing countries to procure vaccines more expeditiously, either by producing them themselves or by streamlining the cumbersome institutional and legal requirements of importing pharmaceutical products from other countries that possess the necessary manufacturing capacity. After months of pushback from activists and political leaders, the U.S. finally expressed its support for patent waivers, with several key Western powers (notably France and the European Union (EU)) following suit. However, Germany—a major political player in the patent waiver debate due to its powerful pharmaceutical sector—continues to oppose the move. Other European countries remain similarly split on the patent waiver proposal, reflecting the fact that any patent waiver proposal will still requires extensive negotiation (in order for it to be accepted, there must be unanimous consent among WTO members). Political leaders and activists continue to call on the West to support the waiving of IP protections, noting that current projections anticipate that wealthy countries will be able to immunize their entire populations by the end of 2021, while developing countries will only see the same results in the next three to four years. Unlike the AIDS pandemic, COVID-19 has generated not only massive medical concerns, but also a global economic crisis: vaccination campaigns in richer countries have already allowed them to begin to rebuild their economies, while mass unemployment and lockdowns continue to strangle the economies of many developing nations. Increasing the supply and accessibility of vaccines in the developing world will undoubtedly facilitate a faster, and more equal, economic recovery. Continuing to allow the virus to spread unencumbered throughout the Global South, however, will only increase the likelihood of further viral mutations, possibly jeopardizing the efficacy of existing vaccines and further perpetuating already grave economic and medical concerns. Washington’s initial unwillingness to **cross the pharmaceutical industry** has undeniably damaged the moral standing of the United States. Moreover, this decision also created a humanitarian void eagerly **filled by Beijing and Moscow**, as they actively seek to position themselves as the benefactors of the most COVID-19-stricken region of the world: Latin America and the Caribbean. To date, Russian and Chinese vaccine diplomacy have already led to economic, diplomatic, and political losses being felt by Washington; this trend, if **allowed to continue**, will only further **limit U.S. regional influence** with its neighbors to the south. A lack of strategy and political will In the absence of an **effective vaccine diplomacy strategy** from Washington, and with the perpetuation of its current nationalistic vaccine policy, some of the **pharmaceutical companies** that the U.S. so readily protects have **pushed countries** throughout Latin America and the Caribbean **into the waiting arms of Beijing and Moscow**. While some Latin American countries have received a few vaccines from Western companies, most nations in the region continue to struggle to obtain doses. Pfizer, a U.S. pharmaceutical company, was accused of bullying Latin American countries during vaccine procurement negotiations, using its own leverage to attempt to force desperate nations to offer sovereign assets—such as their embassies—as collateral. Pfizer’s efforts resulted in a lost deal with Argentina, which has continued to grow increasingly closer to China. While the U.S. possesses a surplus of COVID-19 vaccines, it has failed to develop an effective, far-reaching donation strategy. Only recently did the Biden administration announce its plans to ship 80 million vaccines—a small portion of its surplus supply—abroad. Of the initial 25 million doses destined to be distributed internationally, 19 million will be donated to the largely mismanaged UN-backed COVAX program, with only six million of these COVAX doses designated for Latin America and the Caribbean. In comparison, China alone has donated or sold over 165 million vaccines to Latin America, with countries like Chile and Uruguay having vaccinated 80 and 63 percent of their populations, respectively, with Chinese vaccines. The administration of U.S. President Joe Biden previously donated a total of 4.2 million AstraZeneca vaccines to Canada and Mexico, the first vaccines that the U.S. had sent abroad. Still, this relatively modest donation was preceded by repeated calls from prominent Latin American leaders for President Biden to donate vaccines to U.S. allies in Latin America. Mexican President Andrés Manuel López Obrador (AMLO) was notably rebuffed in his request for shipments of U.S. vaccines, being told by the Biden administration that it was prioritizing the vaccination of the American public (despite the fact that Washington had already bought enough vaccines to inoculate the entire U.S. population several times over). Colombia President Iván Duque of Colombia, a country that is a key regional ally, has also called for the Biden administration to aid countries in the Western Hemisphere that are struggling to procure vaccines. By contrast, some Latin American officials have described **easier negotiations, cheaper prices,** and overall better terms in their successful agreements with Russia and China. Last year, for example, Beijing offered a USD $1 billion loan to Latin American nations to help finance their purchasing of Chinese-made vaccines—an offer that was well-received by recipient countries. Due to a **lack of vaccine support** and assurance from Washington, countries are growing closer to Beijing and Moscow, succumbing to **rival geopolitical powers** that do not align with the diplomatic and economic interests of the United States.

## 5

#### Pharma drug innovation is high now – eliminating patent protections collapses incentives.

The Economist 20 5-23-2020 "Drug innovation is back in fashion" <https://www.economist.com/leaders/2020/05/23/drug-innovation-is-back-in-fashion> (The Economist is an international weekly newspaper printed in magazine-format and published digitally that focuses on current affairs, international business, politics, and technology.)//Elmer

For much of the past two decades big pharma has been a lost cause. Despised by the public, it became notorious for price-gouging, secretiveness and its neglect of global health problems. Big pharma also lost its lustre with investors, despite its bumper profits. They worried that a business model that relied too much on rent-seeking and too little on innovation was unsustainable, and that citizens would eventually revolt and demand more regulation—or even rip up the patent system that gives drugs firms a temporary monopoly over new medicines. As a result, in the five years before the covid crisis the pharmaceutical sector lagged behind America’s s&p 500 index. The pandemic has reminded the world of the industry’s strengths—its capacity to **innovate and provide drugs on a vast scale**. Many of the big firms, such as Johnson & Johnson and Sanofi, are working on covid-19 vaccines and therapies. Scores of smaller companies are at work, too. On May 18th Moderna, an American biotech firm, said that its much-anticipated vaccine has shown positive early results (although some analysts questioned the validity of its tests). AstraZeneca, a big British firm that invests heavily in research and development (r&d), is working on a vaccine with scientists at Oxford University, helped by $1bn of new funding from America’s government. Even before the virus, the industry had started to **invest more heavily**. In the most recent quarter America’s 30 biggest firms boosted their r&d by a median of **6%** year on year. Now medical **innovation is back in fashion.** It looks like big pharma’s moment to shine. However, the pandemic has also created new ethical and political dilemmas. Vaccine nationalism is spreading as governments panic that others may get their hands on crucial drugs first. France’s Sanofi has found itself embroiled in a transatlantic row over who will be first to get any covid-19 vaccine it develops. Paul Hudson, the firm’s boss, stated last week that because the American government invested in his firm’s risky scientific efforts, the United States would have early access. This led to a political explosion in France and a dressing-down from Emmanuel Macron, France’s president. And there is mounting pressure to suspend elements of the patent system. A gathering of the World Health Organisation this week passed a resolution urging drugs firms to pool patent rights. Several dozen current and former world leaders released an open letter demanding that any successful covid-19 vaccine should be made available patent-free. There is an alternative to beggar-thy-neighbour nationalism and taking a sledgehammer to the intellectual-property regime. First, a global agreement is needed to govern the manufacture and distribution of a potential vaccine. It could take several years to vaccinate the world’s population; global co-operation will mean that the vaccine is deployed first where it brings most benefit. Second, the patent system should be preserved because, correctly designed, it **incentivises investment in new treatments**. The big drugs firms have already said they will make any **vaccine available at cost-plus prices**. Arrangements exist for tiered pricing of medicines and free vaccinations for diseases afflicting the world’s poor that should be extended to covid-19 treatments. If a smaller drugs firm tried to price-gouge, governments in the West and elsewhere have the powers to pass compulsory licensing orders in an emergency. When the pandemic passes, there must be no going back to the bad old days. Governments should seek to authorise new drug patents faster, as the best way to balance innovation and lower prices. And big pharma needs to keep investing. That will help shareholders and global public health, too.

#### Reductions in IPP decks innovation.

**Bacchus 20**, James. “An Unnecessary Proposal: A WTO Waiver of Intellectual Property Rights for COVID-19 Vaccines.” Cato.org, 16 Dec. 2020, www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines.//JQ

The primary justification for granting and protecting IP rights is that they are incentives for innovation, which is the main source for long‐​term economic growth and enhancements in the quality of human life. IP rights spark innovation by “enabling innovators to capture enough of the benefits of their own innovative activity to justify taking considerable risks.”[18](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref18) The knowledge from innovations inspired by IP rights spills over to inspire other innovations. The protection of IP rights promotes the diffusion, domestically and internationally, of innovative technologies and new know‐​how. Historically, the principal factors of production have been land, labor, and capital. In the new pandemic world, perhaps an even more vital factor is the creation of knowledge, which adds enormously to “the wealth of nations.” Digital and other economic growth in the 21st century is increasingly ideas‐​based and knowledge intensive. Without IP rights as incentives, there would be less new knowledge and thus less innovation. In the short term, undermining private IP rights may accelerate distribution of goods and services—where the novel knowledge that went into making them already exists. But in the long term, undermining private IP rights would eliminate the incentives that inspire innovation, thus preventing the discovery and development of knowledge for new goods and services that the world needs. This widespread dismissal of the link between private IP rights and innovation is perhaps best reflected in the fact that although the United Nations Sustainable Development Goals for 2030 aspire to “foster innovation,” they make no mention of IP rights.[19](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref19)

#### Only pharma innovation solves global pandemics that risk extinction.

Jeffrey **Sachs 14**, Professor of Sustainable Development, Health Policy and Management @ Columbia University, Director of the Earth Institute @ Columbia University and Special adviser to the United Nations Secretary-General on the Millennium Development Goals) “Important lessons from Ebola outbreak,” Business World Online, August 17, 2014, http://tinyurl.com/kjgvyro

Ebola is the latest of many recent epidemics, also including AIDS, SARS, H1N1 flu, H7N9 flu, and others. AIDS is the deadliest of these killers, claiming nearly 36 million lives since 1981. Of course, even larger and more **sudden epidemics are possible**, such as the 1918 influenza during World War I, which claimed **50-100 million lives** (far more than the war itself). And, though the 2003 SARS outbreak was contained, causing fewer than 1,000 deaths, the disease was on the verge of deeply disrupting several East Asian economies including China’s. There are four crucial facts to understand about Ebola and the other epidemics. First, most emerging infectious diseases are zoonoses, meaning that they start in animal populations, sometimes with a genetic mutation that enables the jump to humans. Ebola may have been transmitted from bats; HIV/AIDS emerged from chimpanzees; SARS most likely came from civets traded in animal markets in southern China; and influenza strains such as H1N1 and H7N9 arose from genetic re-combinations of viruses among wild and farm animals. **New zoonotic diseases are inevitable** as humanity pushes into new ecosystems (such as formerly remote forest regions); the food industry creates more conditions for genetic recombination; and climate change scrambles natural habitats and species interactions. Second, once a new infectious disease appears, its spread through airlines, ships, megacities, and trade in animal products is likely to be **extremely rapid**. These epidemic diseases are new markers of globalization, revealing through their chain of death how vulnerable the world has become from the pervasive movement of people and goods. Third, the poor are the first to suffer and the worst affected. The rural poor live closest to the infected animals that first transmit the disease. They often hunt and eat bushmeat, leaving them vulnerable to infection. Poor, often illiterate, individuals are generally unaware of how infectious diseases -- especially unfamiliar diseases -- are transmitted, making them much more likely to become infected and to infect others. Moreover, given poor nutrition and lack of access to basic health services, their weakened immune systems are easily overcome by infections that better nourished and treated individuals can survive. And “de-medicalized” conditions -- with few if any professional health workers to ensure an appropriate public-health response to an epidemic (such as isolation of infected individuals, tracing of contacts, surveillance, and so forth) -- make initial outbreaks more severe. Finally, the required medical responses, including diagnostic tools and effective medications and vaccines, inevitably lag behind the emerging diseases. In any event, such tools must be **continually replenished**. This requires **cutting-edge biotech**nology, immunology, and ultimately bioengineering to create large-scale industrial responses (**such as millions of doses of vaccines or medicines** in the case of large epidemics). The AIDS crisis, for example, called forth tens of billions of dollars for research and development -- and similarly substantial commitments by the pharmaceutical industry -- to produce lifesaving antiretroviral drugs at global scale. Yet each breakthrough inevitably leads to the pathogen’s mutation, rendering previous treatments less effective. There is no ultimate victory, only a **constant arms race** between humanity and disease-causing agents.

## Case

### 1NC - Pandemics

#### 1 - Waivers don’t improve vaccine supply or distribution - but do allow for poorly made vaccines that undermine vaccine confidence – turns case.

Delgado 21 [(Carla, health & culture journalist who’s written for Insider, Architectural Digest, Elemental, Observer, and Mental Floss) “Experts Say Patent Waivers Aren't Enough To Increase Global Vaccination,” Verywell Health, 5/25/2021] JL

“Waiving intellectual property rights for COVID-19 vaccines is likely to only have a modest impact on global vaccine supply,” William Moss, MD, executive director of the International Vaccine Access Center at the Johns Hopkins Bloomberg School of Public Health, tells Verywell. “A vaccine IP waiver is not in itself likely to lead to increased vaccine production in less developed countries because much more needs to be in place to increase the global vaccine supply.” For several countries outside of the U.S. that have the necessary equipment to produce mRNA vaccines effectively and safely, the IP waiver can be of great help. However, many more countries lack this capacity, and this move still leaves them behind. “The majority of the world’s countries lack the capacity to produce and distribute COVID-19 vaccines, and especially at the scale required to get this pandemic under control,” Richard Marlink, MD, director of the Rutgers Global Health Institute, tells Verywell. “They need funding, manufacturing facilities, raw materials, and laboratory staff with the technological expertise required.” We've already seen what can go wrong with substandard vaccine manufacturing. In April, the Food and Drug Administration (FDA) inspected the Emergent BioSolutions factory in Baltimore and consequently shut down their production after concerning observations, which include:3 The factory was not maintained in a clean and sanitary condition. Waste handling was found to be inadequate because generated waste was transported through the warehouse before disposal, which can potentially contaminate other areas.  Employees were seen dragging unsealed bags of medical waste from the manufacturing area across the warehouse. Peeling paint, paint flecks, loose particles/debris were observed. There were also damaged floors and rough surfaces that cannot be properly cleaned and sanitized.  Employees were seen removing their protective garments where raw materials were staged for manufacturing. They reportedly spoiled about 15 million doses of the Johnson and Johnson COVID-19 vaccine, and more than 100 million doses are on hold as regulators inspect them for possible contamination.4 “Vaccines are complex biological products, much more complex than drugs, and need to be produced by manufacturers and in facilities with the highest quality control standards,” Moss says. “Adverse events associated with a poorly made or contaminated batch of vaccines would have a devastating impact on vaccine confidence.” In a statement last October, Moderna announced that they will not enforce their COVID-19-related patents against those who will make vaccines during this pandemic.5 While waiving some vaccine patents may allow third-party manufacturers to make and sell COVID-19 vaccines, the transfer of skills and technology that will allow them to manage production isn't very simple.  For instance, a spokesperson for Pfizer said that the Pfizer-BioNTech vaccine required 280 different components sourced from 86 suppliers across various countries. Manufacturing the vaccine would require highly specialized equipment and complex technology transfers.6 “Technology transfer also would need to be a critical component to expand vaccine manufacturing by other companies as an IP waiver is insufficient to provide the ‘know how’ needed to manufacture mRNA or adenovirus-vectored COVID-19 vaccines,” Moss says. “And supply chains for the reagents, supplies, and equipment would be needed.” Interested manufacturers would need to have the proper equipment to test the quality and consistency of their manufacturing. At present, the World Health Organization (WHO) has plans to facilitate the establishment of technology hubs to transfer "a comprehensive technology package and provide appropriate training" to manufacturers from lower- and middle-income countries.7 While waiving vaccine patents is necessary, it's likely not enough. Additionally, negotiations about it are still ongoing. Even though the U.S. supports the waiver of COVID-19 vaccine patents, other countries like the United Kingdom, Japan, and Germany oppose it.8 It's also important to remember that manufacturing vaccines is only one step of the process of vaccinating the global population—distributing it is yet another hurdle. “Many countries are counting on COVAX, a global collaboration to distribute COVID-19 vaccines more equitably around the world,” Marlink says. “The single largest supplier to COVAX is in India, where exports have been suspended since March due to the country’s COVID-19 crisis.”

#### 2 - Vital biological products within the vaccine are not disclosed through the plan – hinders vaccine manufacturing.

**Eccleston-Turner**, Mark, **and** Michelle **Rourke 21**. “The Trips Waiver Is Necessary, but It Alone Is Not Enough to Solve Equitable Access to Covid-19 Vaccines.” ASIL, 27 May 2021, www.asil.org/insights/volume/25/issue/9. //JQ

Unlike chemical pharmaceuticals (most drugs), vaccines are large-molecule biological products requiring a great deal of information and know-how to manufacture—information that is not disclosed through patents.[[16]](https://www.asil.org/insights/volume/25/issue/9" \l "_edn16" \o ") Thus, waiving patent rights alone will not enable new manufacturers to come online. The initial text of the proposed waiver by India and South Africa recognizes the crucial role that know-how plays in vaccine manufacturing capacity. However, unlike with patent rights, there is no clear, easy fix contained within the proposed waiver, and pharmaceutical companies will likely strenuously resist such technology transfer. Without knowledge transfer, it will be extremely difficult for LMICs to start COVID-19 vaccine manufacturing, regardless of the removal of patent barriers from the TRIPS waiver.

#### 3 - The plan can’t solve COVID - lack of key supplies.

Tepper 21 James Tepper, 4/10 [James Tepper, (James M. Tepper is an American neuroscientist currently a Board of Governors Professor of Molecular and Behavioral Neuroscience and Distinguished Professor at Rutgers University and an Elected Fellow of the American Association for the Advancement of Science.)]. "Global Covid vaccine rollout threatened by shortage of vital components." Guardian, 4-1-2021, Accessed 8-8-2021. https://www.theguardian.com/world/2021/apr/10/global-covid-vaccine-rollout-threatened-by-shortage-of-vital-components // duongie

Vaccine-makers around the world face shortages of vital components including large plastic growbags, according to the head of the firm that is manufacturing a quarter of the UK’s jab supply. Stan Erck, the chief executive of Novavax – which makes the second vaccine to be grown and bottled entirely in Britain – told the Observer that the shortage of 2,000-litre bags in which the vaccine cells were grown was a significant hurdle for global supply. His warning came as bag manufacturers revealed that some pharmaceutical firms were waiting up to 12 months for the sterile single-use disposable plastic containers, which are used to make medicines of all kinds, including the Pfizer, Moderna and Novavax Covid-19 vaccines. But Erck and his British partners said they were confident they had enough suppliers to avoid disruption to the supply of Novavax. The vaccine is waiting for approval from the Medicines and Healthcare products Regulatory Agency (MHRA) but the first of 60 million doses ordered by the government are already in production in Teesside. The Fujifilm Diosynth Biotechnologies factory began growing the first cells for the Novavax vaccine in Billingham, County Durham this month and in a few weeks they will fill the bioreactor bag, ready to be transported to GlaxoSmithKline’s plant at Barnard Castle to be put into vials for distribution. “The first hurdle is showing it works and we don’t have that hurdle any more,” Erck said. But he added there were others still to overcome. “There’s the media that the cells have to grow in,” Erck said. “You grow them in these 2,000-litre bags, which are in short supply. Then you pour it out and you have to filter it, and the filters are in short supply. The little things count.” Novavax almost ran out of bags at one of its 20 factories earlier this year, but there had been no delays for the UK operation, according to Martin Meeson, global chief executive of Fujifilm Diosynth. “We started working on our part of the supply chain in summer last year,” he said. “We had to accelerate some of the investment here, but the commitment we made last summer to start manufacturing in February has been fulfilled.” Production of coronavirus vaccines is being ramped up. Production of coronavirus vaccines is being ramped up. Photograph: Christophe Archambault/AP Both Meeson and Erck said the UK’s vaccine taskforce had been helpful in sorting out supply issues so far, but other countries and other medical supplies might be affected. ABEC makes bioreactor bags at two plants in the US and two in Fermoy and Kells in Ireland, and delivered six 4,000-litre bags to the Serum Institute in India last year for its Covid vaccines. Brady Cole, vice-president of equipment solutions at ABEC, said: “We are hearing from our customer base of lead times that are pushing out to nine, 10, even 12 months to get bioreactor bags. We typically run out at 16 weeks to get a custom bioreactor bag out to a customer.” He said ABEC was still managing to fulfil orders at roughly that rate. “The bag manufacturing capacity can’t meet demand right now,” he added. “And on the component side, the tubes and the instruments and so forth that also go into the bag assembly – those lead times are also starting to get stretched as well. But the biggest problem we see is it really is just the ability to get bags in a reasonable amount of time.” ABEC expanded its factories last year and has now started making 6,000-litre bags, which are roughly the size of a minibus. Other firms including MilliporeSigma, part of German company Merck, have also been expanding their manufacturing facilities. American firm Thermo Fisher Scientific expects it will finish doubling its capacity this year. The US government has also blocked exports of bags, filters and other components so it can supply more Pfizer vaccines for Americans. Adar Poonawalla, the chief executive of the Serum Institute of India, said the restrictions were likely to cause serious bottlenecks. Novavax is hoping to avoid delays and “vaccine nationalism” by operating on four continents, with 20 facilities in nine countries. “One year ago, we had exactly zero manufacturing capacity,” Erck said. “We’re self-sufficient. The two main things we need to do are done in the UK. And in the EU we have plants in Spain and the Czech Republic and fill-and-finish in Germany and the Netherlands.” There was no need for vaccines to cross borders to fulfil contracts, he said. The Oxford/AstraZeneca vaccine was hit by a delay to a delivery of 5 million doses from India and a problem with a batch made in Britain, and the company has been dragged into a lengthy row between the UK and the EU over vaccine exports.

#### 4 - The waiver fails – trade agreements limit distribution of cheap drugs – ruins any chance of new medicine.

**Bonadio**, Enrico, **and** Dhanay **Cadillo 21**. “Intellectual Property and Covid-19 Medicines: Why a Wto Waiver May Not Be Enough.” The Conversation, 24 Feb. 2021, theconversation.com/intellectual-property-and-covid-19-medicines-why-a-wto-waiver-may-not-be-enough-155920.//JQ

[Other arguments against the waiver](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3789820) are that it would not alleviate the burden of access to effective and affordable medicines and vaccines because of poor healthcare provision and infrastructure in some countries. And that it could potentially hamper R&D and innovation in the pharmaceutical sector. There are other barriers that the waiver wouldn’t address. One is that some developing countries have entered into bilateral agreements, especially with the US, the EU and other industrialised nations. These have limited the ability of generics producers to manufacture and distribute cheap medicines. One example is that this has limited the freedom to rely on parallel imports. These usually guarantee the importation of cheaper medicines purchased in countries where the drugs are sold at a lower price. Also, certain free trade agreements have introduced provisions which prevent national drug regulatory authorities from registering and allowing the sale of generics if the medicine is still patented. This is the so-called “[patent linkage](https://www.drugpatentwatch.com/blog/patent-linkage-resolving-infringement/)”. Among the countries that have signed these agreements are those who are part of the Comprehensive and [Progressive Agreement for Trans-Pacific Partnership](https://link.springer.com/article/10.1007/s40319-018-0758-3). They include Brunei, Chile, Malaysia, Mexico, Peru and Vietnam. Other trade and partnership agreements have also obliged certain developing countries to provide an absolute protection of clinical [test data](http://www.hjil.org/wp-content/uploads/Nsour-FINAL.pdf) submitted to regulatory agencies to demonstrate the quality, safety and efficacy of new medicines. This strong exclusivity stops the manufacturers of generics from using such data while applying for their own marketing authorisation. This inevitably slows down the availability of cheaper drugs. Countries like Morocco, Jordan, El Salvador, Guatemala, Honduras and Nicaragua do protect such data as a consequence of trade agreements concluded with the US.

### 1NC – WTO (??)

#### WTO collapse solves extinction

Hilary 15 John Hilary 2015 “Want to know how to really tackle climate change? Pull the plug on the World Trade Organisation” <http://www.independent.co.uk/voices/want-to-know-how-to-really-tackle-climate-change-pull-the-plug-on-the-world-trade-organisation-a6774391.html> (Executive Director, War on Want)//Elmer

Yet this grandiose plan soon fell victim to its own ambition. The WTO’s first summit after the launch of the Doha Round collapsed in acrimonious failure. The next was marked by pitched battles in the streets of Hong Kong as riot police fought Asian farmers desperately trying to save their livelihoods from the WTO’s free trade agenda. The WTO slipped into a coma. Government ministers must decide this week whether to turn off its life support. The answer is surely yes. It was the WTO’s poisonous cocktail of trade expansion and market deregulation that led to the economic crisis of 2008. Years of export-led growth resulted in a crisis of overproduction that could only be sustained with mountains of debt. The parallel deregulation of financial services meant that this debt soon turned out to be toxic, and the world’s banking system went into freefall. Nor is the WTO fit for purpose on ecological grounds. If last week’s climate talks in Paris taught us anything, it is that we must rethink the model of ever-expanding production and consumption in order to avoid planetary meltdown. Global capitalism may need limitless expansion in order to survive, but the planet is already at the very limits of what it can take. The choice is ours. Worst of all, it is the WTO’s ideology of unrestricted trade and corporate domination that lies behind all the bilateral trade deals that are proliferating at the moment, including the infamous Transatlantic Trade and Investment Partnership (TTIP). We need a radically different model of regulated trade and controlled investment if we are to have any chance of breaking the cycle of economic and ecological crisis. For the planet to survive, the WTO must die.

#### **Alt causes to WTO cred—rules ignored, protectionism, no dispute settlement, lack of US commitment.**

Schott 20 [Jeffrey J. Schott is a senior fellow at the Peterson Institute for International Economics. He is a member of the State Department’s Advisory Committee on International Economic Policy and was previously cochairman of the Trade and Environment Policy Advisory Committee for the U.S. Trade Representative. 5-4-2020 The WTO is Dead ... Long Live the WTO Milken Institute Review https://www.milkenreview.org/articles/the-wto-is-dead-long-live-the-wto] SW 9-5-2021

Now the WTO is increasingly seen as sclerotic. Its rules badly need updating and the dispute-settlement process is breaking down. Multilateral trade talks have collapsed; efforts to conclude even modest deals at the upcom-ing June 2020 meeting of trade ministers seem unlikely. Indeed, it’s no exaggeration to say that the WTO faces an existential crisis. Here, I offer some perspective on what has gone wrong and how to make it right in the face of widespread skepticism that a global rules-based trade system remains viable. Grim Realities There’s no getting around the fact that the WTO’s rules are widely abused or flat-out ignored. Even after the heralded U.S.-China trade deal was announced in January, the U.S. and China continue to violate WTO obligations ‘on a grand scale, with about $425 billion of two-way merchandise trade still subject to duties that violate WTO obligations of both countries. Rules on subsidies, intellectual property and investment, last updated in the 1990s, are inadequate and in-complete, allowing countries to circumvent their market-access commitments with financial support for domestic firms and farmers, and to encourage the misappropriation of foreign technology. Equally alarming, the exemption to the WTO rules allowing trade restrictions for compelling reasons of national security protection has been grossly misapplied by U.S. officials to protect domestic steel, aluminum and possibly auto producers — and by Japan and Korea to justify high-tech trade restrictions. If countries continue to brazenly invoke national security rationales to justify plain and simple protectionism, commitments to open markets that are central to WTO obligations will become increasingly worthless. At the same time, the WTO’s dispute-settlement process, which has helped to resolve almost 600 cases since 1995, has been seriously impaired by the idling of its Appellate Body (AB). All countries have the right to appeal dispute-panel decisions, which are then held in abeyance pending completion of the appeal. But since last December, the AB has been reduced to only one member out of the normal complement of seven. That’s because U.S. officials have blocked the appointments of AB members until other WTO countries approve changes in dispute procedures demanded by the United States. Now, since three members are needed to form a panel to hear appeals, the whole appeals process has been placed in suspended animation. The situation has broad-ranging implications for the multilateral trading system. Preventing new appeals of panel rulings will, of course, allow disputing parties to block implementation of the rulings. This will encourage unilateral actions by countries strong enough to pressure partners and will discourage new rule-making negotiations because of uncertainty that rules will be enforced.

#### The US has structurally undermined WTO legitimacy.

Baschuk 21 [(Bryce, reporter for Bloomberg Economics based in Geneva, Switzerland, has been published in Bloomberg, the Washington Times, United Press International and National Public Radio) “Biden Picks Up Where Trump Left Off in Hard-Line Stances at WTO,” Bloomberg, 2/22/2021] TDI

President Joe Biden’s administration dashed hopes for a softer approach to the World Trade Organization by pursuing a pair of his predecessor’s strategies that critics say risk undermining the international trading system. The U.S. delegation to the WTO, in a statement Monday obtained by Bloomberg, backed the Trump administration’s decision to label Hong Kong exports as “[Made in China](https://www.bloomberg.com/news/articles/2020-10-30/hong-kong-takes-formal-wto-action-on-u-s-made-in-china-order)” and said the WTO had no right to mediate the matter because the organization’s rules permit countries to take any action to protect their “essential security interests.” “The situation with respect to Hong Kong, China, constitutes a threat to the national security of the United States,” the U.S. delegation said. “Issues of national security are not matters appropriate for adjudication in the WTO dispute-settlement system.” Prior to 2016, WTO members generally steered clear of defending their trade actions on the basis of national security because doing so could encourage other nations to pursue protectionist policies that have little or nothing to do with hostile threats. That changed in 2018, when the Trump administration triggered a cold war-era law to justify tariffs on foreign imports of steel and aluminum. In response, a handful of U.S. trade partners, including Canada, the EU, and China filed disputes at the WTO and a ruling in those cases is expected later this year. Since then, more nations -- including Saudi Arabia, India, Russia and others -- have cited the WTO’s national-security exemption in regional trade fights, leading trade experts to warn that such cases could erode the organization’s ability to mediate disputes. The Biden administration on Monday said the U.S. has consistently argued that national-security disputes are not subject to WTO review because it would infringe on a member’s right to determine what is in its own security interests. In spite of the U.S. objection, the WTO granted Hong Kong’s dispute inquiry and will establish a panel of experts to deliberate the matter and render a decision, which could take two to three years. At the same meeting, the Biden administration said it would not agree to appoint new members to the WTO’s appellate body, a seven-member panel of experts who until 2019 had the final say on trade disputes involving billions of dollars worth of international commerce. The Biden administration said it could not do so because the U.S. “continues to have systemic concerns” with the functioning of the appellate body as have all previous administrations over the past 16 years. Though the statement was not entirely unexpected, it confirms America’s bipartisan frustration with the functioning of the WTO appellate body and the new administration’s willingness to block new panelists until changes can be agreed. Once Katherine Tai is confirmed as the U.S. Trade Representative, her office “looks forward to working with” WTO Director-General Ngozi Okonjo-Iweala to tackle the problems with WTO dispute settlement, including the unresolved issues over appellate-body overreach, USTR spokesman Adam Hodge said in an email. “These are long-standing, bipartisan concerns that we hope our trading partners will work with us to address,” he said. The Trump administration broke precedent when it refused to consider any nominees to fill vacancies on the panel until there weren’t enough to sign off on new rulings. As a result, the WTO’s dispute-settlement system has been critically damaged because WTO members are now free to veto any adverse dispute rulings by appealing them into a legal void created by the appellate body’s paralysis.