## 1

#### Interpretation: The affirmative debater must defend reducing intellectual property protections for substances that treat diseases. To clarify, they may not defend substances that prevent diseases.

#### Violation: They defend reducing IP for vaccines – their Zaitchik evidence is specific to Moderna - I have a re-highlighted version below in green.

Zaitchik 1 (Alexander, Alexander Zaitchik is an American freelance journalist who writes on politics, media, and the environment. He has written for The Nation, The New Republic, the Intercept, Rolling Stone, the Guardian, Foreign Policy, the Baffler, the International Herald Tribune, Wired, the San Francisco Chronicle, and The Believer, Jacobin Magazine, among others) **“Moderna’s Pledge Not to Enforce the Patents on Their COVID-19 Vaccine Is Worthless.”** Jacobinmag.com, 4.22.2021, [www.jacobinmag.com/2021/04/moderna-patents-covid-19-vaccine](http://www.jacobinmag.com/2021/04/moderna-patents-covid-19-vaccine). Accessed 9 Aug. 2021. ‌//AA

Suspending enforcement around valuable intellectual property in the midst of a public health crisis appeared, at first glance, like a credible display of noblesse oblige, to be welcomed even if it carried a whiff of incense meant to displace the stink of recent corporate scandals. The media dutifully covered Moderna’s patent pledge as evidence of corporate social commitment in a time of crisis. The patent pledge was widely reported on the assumption that it would, as Reuters put, “allow other drugmakers to develop shots using the company’s technology.” The company was safe in its assumption that scrutiny would stop there, and the public impression would remain that of a sacrifice to help end the pandemic. But this impression is false, and not just because Moderna’s legal claims on technologies developed with government money is provisional in the first place. Moderna’s patent pledge was an empty gesture for another reason quite apart from its long-standing junior partnership with the National Institutes of Health (NIH). Their entire ploy was premised on outdated public perceptions about how intellectual property works in the twenty-first century. Modern Patents on Biomedicines Almost Never Contain the Information Needed to Mass Produce Them. The patent is a form of intellectual property, not a synonym. As inherited shorthand for knowledge monopolies, “patent” is a throwback, a progressively old-fashioned catchall reference that obscures more than it explains, like calling the supercomputer in your pocket a telephone. Understanding why requires revisiting the patent’s origins as a social contract. Emerging in Renaissance Italy, the first patents functioned as royal permission slips; having one meant you could benefit exclusively from a technology, process, or trade. This privilege was half of a limited-term bargain with the sovereign: in exchange for the monopoly, the recipient of the patent agreed to introduce a new and productive form of knowledge into the realm, to be diffused when the patent expired. As technological invention grew more complex, patents required more detailed information to serve as effective notes of collateral: to get the monopoly privilege, inventors had to reveal and submit all of their knowledge — sometimes called “trade secrets” — to the state. Until 1880, the US Patent and Trademark Office required applicants to submit miniature, three-dimensional models, along **with blueprints, instructions, and diagrams** containing everything that someone “skilled in the art” would need to reproduce the invention. When the monopoly term expired, the secrets were spilled into the public domain and, it was hoped, made productive at lower, newly competitive prices. In 2021, that social contract is as quaint as the miniature riverboat buoyancy device a young Abraham Lincoln submitted for patent consideration in 1849. In high technology fields like biomedicine, modern patent applications rarely contain the knowledge required to manufacture the invention. This is by political design, the result of an industry push to change the rules under an obliging Reagan administration and that era’s Democratic Congress. Four decades later, the patent game is one of deterring reproduction, even and especially by those most “skilled in the art.” Key aspects of an invention and its practice are systematically shielded, often indefinitely, by a layered intellectual property barricade involving patents, copyright, and “undisclosed information,” a broad, opaque and relatively new category of intellectual property (IP) that contains three subcategories **vital to making things like vaccines:** know-how, trade secrets, and data. It is within these categories, not in the publicly filed patent, that the most valuable secrets are kept. Industry-oriented legal theorists and intellectual property law professionals sometimes call undisclosed information “the padlock on the patent.” Rare is the new technology without these padlocks to secure a corporation’s crown jewels beyond reach — before, during, and after the term of the legal monopoly. According to the US Defend Trade Secrets Act of 2016 (DTSA), which together with the Uniform Trade Secrets Act of 1985 (UTSA) has been integrated into the global intellectual property regime enforced by the World Trade Organization (WTO), **anything a company deems valuable can be shielded by an undisclosed information claim, including all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically or in writing.** This list begins to explain why Moderna was happy to exchange its patents for a good news cycle. The most important information safely lay elsewhere. Pharma and biotechs trying to establish and protect monopolies can hide just about anything under “undisclosed information,” including technical designs and specs, process and quality control procedures, best production. Unlike patents, claims on “undisclosed information” have no legal term limit. By enjoying infinite life, the category voids the original patent bargain not once, but twice: it allows companies to withhold necessary information from the public domain, which then serves to block competition and extend the granted monopoly beyond the agreed terms. In the age of undisclosed information, applicants are no longer required to provide governments with meaningful collateral in exchange for the benefits of government-protected monopolies. Instead, they can provide partial maps to technologies they have no intention of revealing in full — fragments designed to frustrate, obfuscate, and occlude, providing knowledge that’s necessary but not sufficient to actually make the thing.methods, instruction manuals, and trial data.The New **I**ntellectual **P**roperty Regime Has Other Ways of Protecting Their Valuable Secrets. The IP professionals employed by today’s drug companies descend from the cigar-chomping patent lawyers of last century, who, as much as anyone, are responsible for the growth and power of the modern pharmaceutical and biotech industries. But their twenty-first-century descendants don’t really identify as lawyers. They see themselves as white hats in a double-game of industrial espionage, practitioners in the art of “competitive intelligence.” In the years after the passage of the UTSA in 1985, a unified theory of post-patent IP management began to take shape at corporate-sponsored law school clinics devoted to the art of defending and extending monopolies. One of the most influential was the Center for the Law of Innovation and Entrepreneurship at Franklin Pierce University, directed by Karl F. Jorda, a former head of IP for the Swiss pharma company Ciba, which merged with Sandoz to form Novartis in 1996. In Jorda’s description of the new paradigm, trade secrets had become “the crown jewels of corporations” and patents merely “the tips of icebergs in an ocean of trade secrets.” The task of the modern IP professional is not to file successful patent applications and, as the US Constitution’s progress clause puts it, “promote the progress of science and the useful arts.” Quite the opposite — the point is to oversee, in Jorda’s words, the “synergistic integration of patents and trade secrets to secure invulnerable exclusivity.” This “invulnerable exclusivity” is harmless enough when it protects secret soda formulas and hamburger mystery sauces. It’s less cute when **it blocks countries from using their** legal **right to manufacture and import lifesaving medicines**. But that is exactly the kind of activity the new IP regime was designed to frustrate. During a media call held in May 2020, the director of the pharmaceutical industry’s global trade association, Thomas Cueni, was asked about the possibility that developing countries might issue compulsory licenses to break patents on COVID-19 vaccines. He shrugged off the question by saying out loud what Moderna’s executives intentionally left unsaid. “The focus on IP in vaccines shows a lack of understanding, because with vaccines, it’s all about know-how,” said Cueni. “In the history of IP, there’s never been a compulsory license for vaccines. Not for nothing. It really doesn’t solve the problem.”

#### Medicines treat diseases

Webster (Merriam Webster is America's leading and most-trusted provider of language information, accessed on 6-30-21, Merriam Webster, "Definition of MEDICINE,” https://www.merriam-webster.com/dictionary/medicine)// ww pbj

Definition of medicine 1a: a substance or preparation used in treating disease cough medicine

#### Treatment is different than prevention

Pflanzer 20 (Lydia Ramsey Pflanzer is a healthcare editor for Business Insider. She joined Business Insider in 2015 after graduating from Northwestern University, 4-29-2020, accessed 6/30/21, "Scientists are racing to discover ways to treat and prevent coronavirus. Here's the difference between a treatment and a vaccine.," Business Insider, <https://www.businessinsider.com/whats-the-difference-between-a-vaccine-and-a-treatment-2020-4)//ww> pbj

Vaccines are used to prepare the body's immune system to fight off infections. They work by giving the body a small taste of what the virus is like so that way it can produce antibodies that fight off an intruding virus, ideally keeping people from falling ill. Some vaccines protect better than others, and they're typically administered across broad populations. There are vaccines for some infectious diseases, like the flu, smallpox, measles, and chickenpox. But others, like HIV and hepatitis C, don't have vaccines that protect against them. Vaccines that protect against two other deadly outbreaks, MERS and SARS, have yet to be approved after the outbreaks subsided. There are more than 70 potential coronavirus vaccines in the works, with a number in early human trials. Drugmakers are looking into ways to produce the billions of doses that might be needed to suppress the pandemic. Read more: There are more than 70 potential coronavirus vaccines in the works. Here are the top efforts to watch, including the 16 vaccines set to be tested in people this year. FILE - In this March 2020 photo provided by Gilead Sciences, a vial of the investigational drug remdesivir is visually inspected at a Gilead manufacturing site in the United States. Given through an IV, the medication is designed to interfere with an enzyme that reproduces viral genetic material. (Gilead Sciences via AP) FILE - In this March 2020 photo provided by Gilead Sciences, a vial of the investigational drug remdesivir is visually inspected at a Gilead manufacturing site in the United States. Given through an IV, the medication is designed to interfere with an enzyme that reproduces viral genetic material. (Gilead Sciences via AP) Associated Press Treatments, on the other hand, are meant to do just that: treat COVID-19, helping patients sickened by the virus survive and recover more quickly. Treatments for disease are there to lessen symptoms and ultimately improve the outcomes of a particular disease. Sometimes, medications can be used preventatively. For instance, patients with high cholesterol might be prescribed a medication called a statin to prevent heart attacks. Some potential coronavirus treatments are being studied to see if they can prevent people from contracting the virus in the first place. For COVID-19, researchers are testing everything from antimalarial medications to antivirals, to even common heartburn medications in hospitalized patients with the hopes that more patients will survive severe forms of the illness and potentially recover faster. Some are looking at ways to use patients' own bodies to fight the virus with antibody treatments.

#### Vaccines specifically are different from medicines

Immunize BC 20 (Immunize British Colombia is a collaborative project of the BC Ministry of Health, the BC Centre for Disease Control (an agency of the BC Provincial Health Services Authority), the regional health authorities (First Nations Health Authority, Fraser Health, Interior Health, Island Health, Northern Health and Vancouver Coastal Health), the BC Pharmacy Association and the Public Health Association of BC. Our mission is to improve the health of British Columbians by continuing to reduce the number of vaccine-preventable diseases, along with the illness, disability and death that they cause, What are vaccines?, Date last reviewed: Thursday, Mar 19, 2020, accessed on 6-30-21, <https://immunizebc.ca/what-are-vaccines)//ww> pbj

Vaccines are products that protect people against many diseases that can be very dangerous and even deadly. Different than most medicines that treat or cure diseases, vaccines prevent you from getting sick with the disease in the first place.

#### Standards:

#### [1] Limits – they explode the topic to include tons of substances that prevent disease rather than treat them like soap, medical supplies, or food and make it so there is *no* unified neg generics. The aff still gets the core of the topic lit: they get medicine, innovation, and global inequality. Explosion of aff ground makes neg prep burden impossible, either killing neg ground or forcing the neg to read generics that barely link, always letting aff win. Force the 1AR to read a definition card with a clear list of what’s included and excluded – otherwise, vote neg since they can’t put a clear limit on the topic. Our interp solves – it establishes a clear bright-line for that gives the neg a chance to predict and prepare for every aff ahead of time. At best, the aff’s extra-T still links to all our offense since they can get extra-T advantages to solve disads and defend whatever they want, magnifying limits.

#### [2] Shiftiness – not defending the text of the resolution justifies the affirmative doing away with random words in the resolution which makes them unpredictable and impossible to engage with.

#### Voters:

#### [1] Fairness – constitutive to the judge to decide the better debater, only fairness is in your jurisdiction because it skews decision making

#### [2] Education – the only portable education from debate that we care about

#### T before theory – norm-setting in the cointext of the res has larger pre-fiat implications.

#### A] applies to more rounds since everyone is debating the res

#### B] norms from T can be applied to several resolutions since they often share the same grammar.

#### DTD:

#### [1] it drops the whole AC so dta is the same thing.

#### [2] deters future abuse since wins and losses determine the activity’s direction.

#### Competing Interps:

#### [1] reasonability on t is incoherent: you’re either topical or you’re not – it’s impossible to be 77% topical, links to all limits offense

#### [2] functionally the same as reasonability – we debate over a specified briteline which is a counter interp

#### [3] judge intervention – judge has to intervene on what’s reasonable, creates a race to the bottom where debaters exploit judge tolerance for questionable argumentation.

#### No RVIs

#### [1] illogical for you to get offense just for being fair – it’s the 1ac’s burden

#### [2] baiting - rvi’s incentivize debaters to read abusive positions to win off theory

## 2

#### The U.S. is leading the world in biotechnology now, but China is catching up and creating economic, security and regulatory threats.

**Moore ‘20** (Scott Moore, Director of the Penn Global China Program@UPenn, Young Professional and Water Resources Management Specialist at the World Bank Group, Environment, Science, Technology, Health Officer for China at the U.S. Dept of State, Giorgio Ruffolo Post-Doctoral Research Fellow with the Belfer Center for Science and International Affairs@Harvard; “China’s Role In The Global Biotechnology Sector And Implications For U.S. Policy”, April 2020, https://www.brookings.edu/wp-content/uploads/2020/04/FP\_20200427\_china\_biotechnology\_moore.pdf)//HW-CC

Even by the standards of emerging technologies, biotechnology has the potential to utterly transform geopolitics, economics, and society in the 21st century. Yet while the United States has long been the world leader in most segments of the global biotechnology sector, China is fast becoming a significant player. This brief assesses the implications of China’s changing role in biotechnology for the United States, which span **national security, data security, and economic competitiveness**. On current trends the United States is likely to remain the world leader in most biotechnology areas. However, the gap between China and the U.S. is narrowing in the biotechnology sector, and U.S. policymakers must boost public investment, liberalize immigration and foreign student visa policies, and enact regulatory reforms to ensure America remains competitive. At the same time, areas like vaccine development and regulation of emerging technologies like synthetic biology present rich opportunities for Sino-U.S. cooperation. INTRODUCTION Thanks to extensive government funding for biomedical research, an unparalleled ability to translate basic research into commercial products and applications, and strong intellectual property protections, the United States has been the dominant global player in developing and commercializing biotechnology for decades.1 This dominance is reflected in the fact that United States accounted for almost half of all biotechnology patents filed worldwide from 1999 to 2013.2 However, in the intervening years, and just as in the case of artificial intelligence and other emerging technologies, other nations, including South Korea and Singapore, have invested heavily in developing their biotechnology sectors and industries. These efforts pale, however, in comparison to those of China, and the sheer size and scale of the Chinese biotechnology industry pose a range of economic, security, and regulatory issues for American policymakers. The determination of China’s one-party state to become a leading player in biotechnology is reflected by the rapid growth in investment in the sector. Some estimates claim that collectively, China’s central, local, and provincial governments have invested over $100 billion in life sciences research and development. Regardless of the true figure, official encouragement has led to a torrid place of investment. In just the two-year period from 2015 to 2017, venture capital and private equity investment in the sector totaled some $45 billion.3 The value of commercial deals concluded in the fields of biology, medicine and medical machine technology, meanwhile increased from 25.8 billion renminbi (RMB), or $3.6 billion, in 2011 to over 75 billion RMB ($10.6 billion) in 2017.4 Annual research and development expenditures by Chinese pharmaceutical firms, the foundation of the biotechnology sector, rose from some 39 billion RMB in 2014 ($5.5 billion) to over 53 billion RMB (US$7.5 billion) by 2017. Expenditure on new product development among these firms, an important indicator of future growth potential, increased from just over 40 billion RMB ($5.6 billion) to almost 60 billion ($8.4 billion).5 By Western standards, some of these figures are still low. Swiss drugmaker Roche, the world leader in biotechnology research and development, spent some $11 billion in 2018 alone.6 As these figures suggest, the development of China’s biotechnology sector paints a nuanced picture for U.S. policymakers. On one hand, the sector’s rapid growth, and high-level commitment to continued investment, means that China will inevitably become an increasingly important player in the global biotechnology sector, with implications for national security, economic competitiveness, and regulation. An executive from In-Q-Tel, the U.S. government’s inhouse national security venture capital fund, warned Congress in a November 2019 hearing, for example, that **China** “**intends to own the biorevolution**… and they are building the infrastructure, the talent pipeline, the regulatory system, and the financial system they need to do that.”7 The CEO of European drugmaker AstraZeneca has similarly opined that “Much of [China’s] innovation in the last three to four years has been ‘me too,’ but now on the horizon we can see firstin-class innovation.”8 Yet on the other hand, while China’s biotechnology sector will almost certainly continue to grow in scale, sophistication, and competitiveness, there is little reason to believe on current trends that the United States will lose its edge in the sector. Indeed, the biggest risk to the global competitiveness of the U.S. biotechnology industry likely comes from the prospect of declining public investment and reduced mobility for world-class researchers and industry professionals. Moreover, the COVID-19 crisis underscores both the importance of continued investment in biotechnology and the many challenges to promoting effective international cooperation on global health security. This brief first examines the key policies and actors in China’s biotechnology sector, then offers an assessment of the sector’s current capabilities and future trends, and finally further explores the implications of developments in Chinese biotechnology for U.S. policy

#### The plan gives away key research and national security info that would let China take over biotech.

**Rogin ‘21** (Josh Rogin, Washington Post Columnist on National Security, 4/8/21. “Opinion: The wrong way to fight vaccine nationalism” <https://www.washingtonpost.com/opinions/global-opinions/the-wrong-way-to-fight-vaccine-nationalism/2021/04/08/9a65e15e-98a8-11eb-962b-78c1d8228819_story.html)//HW-CC>. Bracketed for grammar.

Americans will not be safe from covid-19 until the entire world is safe. That basic truth shows why vaccine nationalism is not only immoral but also counterproductive. But the simplest solutions are rarely the correct ones, **and some countries are using the issue to advance their own strategic interests**. The Biden administration must reject the effort by some nations to turn our shared crisis into their opportunity. As the inequities of vaccine distribution worldwide grow, a group of more than 50 developing countries led by India and South Africa is pushing the World Trade Organization to dissolve all international intellectual property protections for pandemic-related products, which would include vaccine research patents, manufacturing designs and technological know-how. The Trump administration rejected the proposal to waive the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) for the pandemic when it was introduced in October. Now, hundreds of nongovernmental organizations and dozens of Democratic lawmakers are pushing the Biden administration to support the proposal. But many warn **t**he move would **result in the United States handing over a generation of advanced research** — much of it funded by the U.S. taxpayer — **to** our country’s greatest competitors, above all **China**. In Congress, there’s justified frustration with the United States’ failure to respond to China’s robust vaccine diplomacy, in which Beijing has conditioned vaccine offers to pandemic-stricken countries on their ignoring security concerns over Chinese telecom companies or abandoning diplomatic recognition of Taiwan. There’s also a lot of anger at Big Pharma among progressives for profiting from the pandemic. “We are in a race against time, and unfortunately Big Pharma is standing in the way of speedily addressing this problem,” Rep. Jan Schakowsky (D-Ill.), who supports the effort to waive intellectual property protections, told me in an interview. “I think the real security issue is that while the United States balks in making sure that we help ourselves, that these adversaries will just jump right in.” Schakowsky argued that alternative measures for helping poor countries manufacture vaccines are simply not moving fast enough to save lives and that the United States has a duty to respond. House Speaker Nancy Pelosi (D-Calif.) personally conveyed her support for the waiver to President Biden, Schakowsky said. But Big Pharma is just one piece of the puzzle. Countries such as India and South Africa have been trying to weaken WTO intellectual property protections for decades. The mRNA technology that underpins the Pfizer and Moderna vaccines was funded initially by the Defense Advanced Research Projects Agency and has national security implications.Inside the Biden administration, the National Security Council has already convened several meetings on the issue. The waiver is supported by many global health officials in the White House and at the U.S. Agency for International Development, who believe the United States’ international reputation is suffering from its perceived “America First” vaccine strategy. On Wednesday, U.S. Trade Representative Katherine Tai spoke with WTO Director General Ngozi Okonjo-Iweala about the waiver issue. USTR is convening its own interagency meetings on the issue, which many see as a move to reassert its jurisdiction over WTO matters. If and when this does get to Biden’s desk, he will also hear from national security officials who believe that waiving TRIPS would result in the forced transfer of national security-sensitive technology to China, **a country that strives to dominate the biotechnology** ***field*** as part of its Made in China 2025 strategy. **Once countries such as China [has]** have **this technology, they will apply their mercantilist industrial models to ensure their companies dominate these strategically important industries, potentially erasing thousands of U.S. jobs.** “We would be delivering a competitive advantage to countries that are increasingly viewed as our adversaries, at taxpayer expense, when there are other ways of doing this,” said Mark Cohen, senior fellow at the University of California at Berkeley Law School. A preferable approach would be to build more vaccine-manufacturing capacity in the United States and then give those vaccines to countries in need, said Cohen. The U.S. pharmaceutical industry would surely benefit, but **that’s preferable to being dependent on other countries when the next pandemic hits.** “If there’s anything that the pandemic has taught us, it’s that we need to have a robust supply chain, for ourselves and for the world generally,” Cohen said. What’s more, it’s not clear that waiving the TRIPS agreement for the pandemic would work in the first place. Bill Gates and others involved in the current vaccine distribution scheme have argued that it would not result in more vaccines, pointing out that licensing agreements are already successfully facilitating cooperation between patent-holding vaccine-makers and foreign manufacturers. Critics respond that such cooperation is still failing to meet the urgent needs in the developing world. Vaccine equity is a real problem, but waiving intellectual property rights is not the solution. If the current system is not getting shots into the arms of people in poor countries, we must fix that for their sake and ours. But the pandemic and our responses to it have geopolitical implications, whether we like it or not. **That means helping the world and thinking about our strategic interests at the same time.**

#### China will use biotech to get the military advantage and hurt US primacy – that opens the door for personalized bioterror attacks.

**Kuo ‘17**(Mercy Kuo, Executive VP@ Pamir Consulting, Former member of the National Committee on US China Relations, M.A. in Chinese History@UMich; August 2017, “The Great US-China Biotechnology and Artificial Intelligence Race” <https://thediplomat.com/2017/08/the-great-us-china-biotechnology-and-artificial-intelligence-race/>)//HW-CC

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.**

#### US Primacy solves arms races, land grabs, rogue states, and great power war – reject old defense that ignores emerging instability and compounding risk.

Brands ‘18 [Hal, Henry Kissinger Distinguished Professor at Johns Hopkins University's School of Advanced International Studies and a senior fellow at the Center for Strategic and Budgetary Assessments." American Grand Strategy in the Age of Trump." Page 129-133]

Since World War II, the United States has had a military second to none. Since the Cold War, America has committed to having overwhelming military primacy. The idea, as George W. Bush declared in 2002, that America must possess “strengths beyond challenge” has featured in every major U.S. strategy document for a quarter century; it has also been reflected in concrete terms.6 From the early 1990s, for example, the United States consistently accounted for around 35 to 45 percent of world defense spending and maintained peerless global power-projection capabilities.7 Perhaps more important, U.S. primacy was also unrivaled in key overseas strategic regions—Europe, East Asia, the Middle East. From thrashing Saddam Hussein’s million-man Iraqi military during Operation Desert Storm, to deploying—with impunity—two carrier strike groups off Taiwan during the China-Taiwan crisis of 1995– 96, Washington has been able to project military power superior to anything a regional rival could employ even on its own geopolitical doorstep. This military dominance has constituted the hard-power backbone of an ambitious global strategy. After the Cold War, U.S. policymakers committed to averting a return to the unstable multipolarity of earlier eras, and to perpetuating the more favorable unipolar order. They committed to building on the successes of the postwar era by further advancing liberal political values and an open international economy, and to suppressing international scourges such as rogue states, nuclear proliferation, and catastrophic terrorism. And because they recognized that military force remained the ultima ratio regum, they understood the centrality of military preponderance. Washington would need the military power necessary to underwrite worldwide alliance commitments. It would have to preserve substantial overmatch versus any potential great-power rival. It must be able to answer the sharpest challenges to the international system, such as Saddam’s invasion of Kuwait in 1990 or jihadist extremism after 9/11. Finally, because prevailing global norms generally reflect hard-power realities, America would need the superiority to assure that its own values remained ascendant. It was impolitic to say that U.S. strategy and the international order required “strengths beyond challenge,” but it was not at all inaccurate. American primacy, moreover, was eminently affordable. At the height of the Cold War, the United States spent over 12 percent of GDP on defense. Since the mid-1990s, the number has usually been between 3 and 4 percent.8 In a historically favorable international environment, Washington could enjoy primacy—and its geopolitical fruits—on the cheap. Yet U.S. strategy also heeded, at least until recently, the fact that there was a limit to how cheaply that primacy could be had. The American military did shrink significantly during the 1990s, but U.S. officials understood that if Washington cut back too far, its primacy would erode to a point where it ceased to deliver its geopolitical benefits. Alliances would lose credibility; the stability of key regions would be eroded; rivals would be emboldened; international crises would go unaddressed. American primacy was thus like a reasonably priced insurance policy. It required nontrivial expenditures, but protected against far costlier outcomes.9 Washington paid its insurance premiums for two decades after the Cold War. But more recently American primacy and strategic solvency have been imperiled. THE DARKENING HORIZON For most of the post–Cold War era, the international system was— by historical standards—remarkably benign. Dangers existed, and as the terrorist attacks of September 11, 2001, demonstrated, they could manifest with horrific effect. But for two decades after the Soviet collapse, the world was characterized by remarkably low levels of great-power competition, high levels of security in key theaters such as Europe and East Asia, and the comparative weakness of those “rogue” actors—Iran, Iraq, North Korea, al-Qaeda—who most aggressively challenged American power. During the 1990s, some observers even spoke of a “strategic pause,” the idea being that the end of the Cold War had afforded the United States a respite from normal levels of geopolitical danger and competition. Now, however, the strategic horizon is darkening, due to four factors. First, great-power military competition is back. The world’s two leading authoritarian powers—China and Russia—are seeking regional hegemony, contesting global norms such as nonaggression and freedom of navigation, and developing the military punch to underwrite these ambitions. Notwithstanding severe economic and demographic problems, Russia has conducted a major military modernization emphasizing nuclear weapons, high-end conventional capabilities, and rapid-deployment and special operations forces— and utilized many of these capabilities in conflicts in Ukraine and Syria.10 China, meanwhile, has carried out a buildup of historic proportions, with constant-dollar defense outlays rising from US$26 billion in 1995 to US$226 billion in 2016.11 Ominously, these expenditures have funded development of power-projection and antiaccess/area denial (A2/AD) tools necessary to threaten China’s neighbors and complicate U.S. intervention on their behalf. Washington has grown accustomed to having a generational military lead; Russian and Chinese modernization efforts are now creating a far more competitive environment. Second, the international outlaws are no longer so weak. North Korea’s conventional forces have atrophied, but it has amassed a growing nuclear arsenal and is developing an intercontinental delivery capability that will soon allow it to threaten not just America’s regional allies but also the continental United States.12 Iran remains a nuclear threshold state, one that continues to develop ballistic missiles and A2/AD capabilities while employing sectarian and proxy forces across the Middle East. The Islamic State, for its part, is headed for defeat, but has displayed military capabilities unprecedented for any terrorist group, and shown that counterterrorism will continue to place significant operational demands on U.S. forces whether in this context or in others. Rogue actors have long preoccupied American planners, but the rogues are now more capable than at any time in decades. Third, the democratization of technology has allowed more actors to contest American superiority in dangerous ways. The spread of antisatellite and cyberwarfare capabilities; the proliferation of man-portable air defense systems and ballistic missiles; the increasing availability of key elements of the precision-strike complex— these phenomena have had a military leveling effect by giving weaker actors capabilities which were formerly unique to technologically advanced states. As such technologies “proliferate worldwide,” Air Force Chief of Staff General David Goldfein commented in 2016, “the technology and capability gaps between America and our adversaries are closing dangerously fast.”13 Indeed, as these capabilities spread, fourth-generation systems (such as F-15s and F-16s) may provide decreasing utility against even non-great-power competitors, and far more fifth-generation capabilities may be needed to perpetuate American overmatch. Finally, the number of challenges has multiplied. During the 1990s and early 2000s, Washington faced rogue states and jihadist extremism—but not intense great-power rivalry. America faced conflicts in the Middle East—but East Asia and Europe were comparatively secure. Now, the old threats still exist—but the more permissive conditions have vanished. The United States confronts rogue states, lethal jihadist organizations, and great-power competition; there are severe challenges in all three Eurasian theaters. “I don’t recall a time when we have been confronted with a more diverse array of threats, whether it’s the nation state threats posed by Russia and China and particularly their substantial nuclear capabilities, or non-nation states of the likes of ISIL, Al Qaida, etc.,” Director of National Intelligence James Clapper commented in 2016. Trends in the strategic landscape constituted a veritable “litany of doom.”14 The United States thus faces not just more significant, but also more numerous, challenges to its military dominance than it has for at least a quarter century.

#### Marginalized communities are hit hardest by war.

Jason McDonald [Jason McDonald teaches US immigration history and Latino history at Iowa State University] (2006) Marginalising the Marginalised in Wartime: African Americans and Mexican Americans in Austin, Texas, during the World War I Era, Journal of Ethnic and Migration Studies, 32:1, 129-144, DOI: 10.1080/13691830500335382

This article examines the impact of war upon a dominant society's attitudes towards and treatment of ethnic minorities. Although recent scholarship suggests that war generally has a negative effect on minorities, this position has been arrived at by focusing almost entirely upon the experiences of enemy-alien groups, while established or newly-arrived outgroups not linked to the external foe have largely been ignored. This poses the question: does war also have a negative effect upon the latter two types of ethny? If so, are their experiences more or less severe than that of enemy-alien groups? These issues are addressed here by examining white perceptions and treatment of non-white minorities during the World War I era in Austin, Texas, which contained sizeable numbers of the three population groups relevant to this discussion: an enemy-alien minority, German Americans; a long-standing ethnic outgroup, African Americans; and a recently established immigrant ethny, Mexicans. This study shows that war not only has a generally negative effect on minorities—with the previously most marginalised ethnies tending to suffer the most, even more so than enemy-alien groups—but that this deterioration in ethnic relations can generate patterns of interaction that survive long after the war has ended.

## 3

#### Counterplan: The World Trade Organization ought to -

#### 1] Increase covax support

#### 2] Prioritize trade facilitation

#### 3]Commit to aid for LDC’s

#### 4] Invest in pandemic preparedness

#### Humanitarian aid is the most effective method of pandemic response in the global south – ensures short-term vaccine equity and long-term infrastructure.

[Violeta Gonzalez](https://www.devex.com/news/authors/1581504) 8-1-2021, "Opinion: 4 ways to promote vaccine equity through trade," Devex, https://www.devex.com/news/opinion-4-ways-to-promote-vaccine-equity-through-trade-100457

As of Monday, only [1.1 % of people in low-income countries](https://ourworldindata.org/covid-vaccinations) had received at least one COVID-19 vaccine dose. This is making it harder to battle a third wave of infections, as the highly transmissible [delta variant](https://news.un.org/en/story/2021/07/1095152) spreads across many nations. In the [World Health Organization](https://www.devex.com/organizations/world-health-organization-who-30562)’s Africa region — where a [high number](https://www.uneca.org/sites/default/files/com/2021/E2100045-English-CoM21-Progress-in-the-implementation-of-the-priority-areas-of-the-Programme-of-Action-for-the-Least-Developed-Countries-for-the-Decade-2011-2020_Istanbul-Programme-of-Action.pdf) of LDCs are located — COVID-19 fatalities [surged 44.2%](https://apps.who.int/iris/bitstream/handle/10665/342715/OEW28-0511072021.pdf) over one week in July. The coronavirus is [devastating](https://www.un.org/development/desa/dpad/2021/major-study-on-covid-19-impact-on-ldcs-released/) many LDCs’ already fragile economies and causing poverty and inequality to rise. Without equitable access to vaccines, [global economic recovery cannot be sustained](https://www.wto.org/english/news_e/news21_e/gc_05may21_e.htm) and progress toward the Sustainable Development Goals will be derailed. While trade alone cannot eradicate vaccine unequity or its negative consequences for the [economy](https://news.un.org/en/story/2021/05/1091732) and [vulnerable groups](https://observatoryihr.org/news/covid-19-vaccine-distribution-highlights-social-inequality/), it has a powerful contribution to make. Here are four actions that would make an impact: 1. Increase COVAX support Vaccine equity can only be achieved if the global community eschews vaccine nationalism. High-resource countries should [ramp up donations](https://www.devex.com/news/wto-chief-to-g-20-donate-2-3b-more-covid-19-vaccine-doses-100306) through the vaccine-sharing initiative COVAX and commit to securing a swift, workable resolution to ongoing debates around [technology transfers and intellectual property waivers](https://www.devex.com/news/wto-council-offers-hope-for-trips-vaccine-proposal-100125). While countries in the G-7 group of nations have [pledged to increase their support](https://www.who.int/news/item/13-06-2021-g7-announces-pledges-of-870-million-covid-19-vaccine-doses-of-which-at-least-half-to-be-delivered-by-the-end-of-2021) for COVAX, the initiative has faced hurdles in the form of [supply bottlenecks](https://www.devex.com/news/india-crisis-puts-covax-150-million-doses-behind-schedule-99860), [export restrictions](https://unctad.org/news/export-restrictions-do-not-help-fight-covid-19), and [logistical weaknesses](https://www.devex.com/news/the-cold-chain-storage-challenge-99869). Many currently available COVID-19 vaccines have short shelf lives and must be stored at low temperatures. LDCs can only benefit from donated doses if they have fast and efficient processing at their borders, modern transportation systems, and access to cold chain infrastructure. 2. Prioritize trade facilitation Accelerating implementation of the [World Trade Organization](https://www.devex.com/organizations/world-trade-organization-wto-44694)’s 2017 [Trade Facilitation Agreement](https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm) is critical for helping LDCs overcome these challenges. A total of [154 WTO members](https://www.tfafacility.org/ratifications) now support the agreement, which pledges investment in the simplification and modernization of the movement, release, and customs clearance of goods globally. It also aims to help low-income countries overcome these same barriers through technical assistance and capacity building. The [Global Alliance for Trade Facilitation](https://www.devex.com/organizations/global-alliance-for-trade-facilitation-102992) has made good progress in identifying barriers to vaccine equity and introducing solutions. In [Mozambique](https://www.tradefacilitation.org/article/two-new-mozambique-projects-aim-to-ease-access-to-vaccines-medical-products/), for example, the alliance is working to digitalize pre-shipment authorization for vaccine imports — a process that can take as long as two weeks, during which vaccine doses must be kept in storage. This digitalization should help Mozambique decrease wait times, improve shipment traceability, and reduce storage and inventory management costs. Yet more work remains to help governments overcome [challenges associated with implementing](https://www.wto-ilibrary.org/trade-facilitation-and-customs-valuation/world-trade-report-2015_f2985d96-en) the Trade Facilitation Agreement, such as changing domestic legislation and involving the private sector. Lower-income countries and LDCs have flagged a need around human resources and training, legal assistance, and the acquisition of information and communication technologies. 3. Commit to Aid for Trade For LDCs to participate fairly in global vaccine supply chains — as importers or exporters of inputs and finished products — they need financial and technical assistance to strengthen their [productive capacity](https://www.devex.com/news/cepi-ceo-concerted-effort-needed-to-build-lmic-vaccine-manufacturing-100013), streamline their cross-border standards and processes, and improve their logistics infrastructure and [technological know-how](https://www.wto.org/english/news_e/news21_e/dgno_21may21_e.htm). The Aid for Trade initiative exists to provide that support — but can only deliver if donor countries maintain or increase their official development assistance, or ODA. Preliminary figures from the [Organisation for Economic Co-operation and Development](https://www.devex.com/organizations/organisation-for-economic-co-operation-and-development-oecd-29872) show that [Development Assistance Committee](https://www.devex.com/organizations/development-assistance-committee-dac-100607) members [expanded their ODA by $10 billion](https://www.devex.com/news/what-to-make-of-the-2020-dac-stats-99641) between 2019 and 2020, mostly as part of their COVID-19 response. However, with several government donors having reprogrammed their aid budgets to focus on immediate health priorities, [fears are growing](https://www.weforum.org/agenda/2021/01/helping-small-businesses-build-resilience/) that their overall ODA may also be slashed — and, with this, their support for Aid for Trade. The generosity of some countries provides hope. Norway, for example, recently stepped up to help plug such gaps with [45 million Norwegian kroner](https://www.wto.org/english/news_e/news21_e/if_22jun21_e.htm) of additional funding for the WTO-backed [Enhanced Integrated Framework](https://www.devex.com/organizations/enhanced-integrated-framework-eif-78046), a global Aid for Trade program that aims to reduce poverty. 4. Invest in preparedness In 2019, only [$374 million](http://www.healthdata.org/sites/default/files/files/policy_report/FGH/2020/FGH_2019_Interior_Final_Online_2020.09.18.pdf) — or less than 1% — of the world’s total development assistance for health was spent on pandemic preparedness. Within months, the consequences of that underinvestment became clear. Integrating lower-income countries and LDCs into global and regional [pharmaceutical value chains](https://unctad.org/news/unctad-report-says-least-developed-countries-position-improve-access-medicines-through-local-0) is vital for ensuring the world is better prepared next time. Directing increased aid to help these countries become [producers and exporters](https://www.bloomberg.com/news/articles/2021-07-26/africa-must-build-vaccine-production-capacity-wto-chief-says) of medical equipment and vaccines has never been more needed. LDCs would not only receive more of the [vaccines and therapeutics they need now](https://trade4devnews.enhancedif.org/en/op-ed/access-denied-ensuring-vaccines-worlds-poorest-countries) but could actively contribute to the global response when the next pandemic inevitably hits.

#### Multiple international bodies agree. Cross-national survey data demonstrates uniqueness, timeliness, and feasibility.

UNESCAP 7/14/21

UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific). “Progress in streamlining trade procedures continues despite COVID-19 crisis, UN survey shows.” News. Press Release. Bangkok, 14, Jul 2021. [https://www.unescap.org/news/progress-streamlining-trade-procedures-continues-despite-covid-19-crisis-un-survey-shows#](https://www.unescap.org/news/progress-streamlining-trade-procedures-continues-despite-covid-19-crisis-un-survey-shows) Accessed 8/14/21. CAT

Countries across the globe are continuing to move towards a seamless and efficient trading environment, within and beyond national borders, by simplifying and digitalizing formalities in international trading, helping to sustain international trade despite the disruption caused by the COVID-19 pandemic, according to a survey released today by the United Nations regional commissions. The United Nations Global Survey on Digital and Sustainable Trade Facilitation is produced biennially by the Economic Commission for Africa (ECA), the Economic Commission for Europe (ECE), the Economic Commission for Latin America and Caribbean (ECLAC), the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Economic and Social Commission for Western Asia (ESCWA). The Survey covers not only the trade facilitation measures in the WTO Trade Facilitation Agreement, but also digital trade facilitation measures associated with the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific, a UN treaty which entered into force earlier this year. The Survey also pays closer attention to sectors and groups with special needs, such as the agricultural sector, small and medium enterprises and women traders. A new module on trade facilitation during times of crisis like the COVID-19 pandemic was integrated this year. Many developing countries have made rapid progress in streamlining trade procedures, particularly in Asia and the Pacific. The Survey, covering 143 countries, shows that the global average implementation rate of trade facilitation and paperless trade measures at 65 per cent. Based on 128 common countries, it is an increase of 5 percentage points from an average of 61 per cent to 66 per cent in the last Survey in 2019. In 2021, developed economies have the highest implementation rate (82 per cent), followed by countries in South-East and East Asia (75 per cent). Pacific Islands have the lowest implementation rate (44 per cent). In the Asia-Pacific region, implementation increased by nearly 6 percentage points since 2019, with most progress made in Pacific Island Developing Economies, although they have the lowest implementation rate of all subregions. Many of the measures included in the WTO Trade Facilitation Agreement have been largely implemented. However, implementation of measures to achieve cross-border paperless trade remains much lower than that of others in large part because these measures – such as electronic exchange of customs declaration or certificate of origins across borders – require trust and closer collaboration among countries. “Implementation of cross-border paperless trade remains a challenge everywhere, even though the COVID-19 pandemic highlighted how useful it can be to exchange documents electronically to reduce physical contacts and the spread of the virus,” according to Armida Salsiah Alisjahbana, United Nations Under-Secretary-General and Executive Secretary of ESCAP. “I encourage all leaders to take advantage of all available global and regional mechanisms to make progress, such as the WTO Trade Facilitation Agreement and the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific.” The results are available at untfsurvey.org. The global and regional reports, including detailed data analysis, will be published later this year.

## Case

#### 1] On drug monopolies – China demonstrates that safeguards are possible—reject their assumption that FTAs are inherently exploitative

Bing 21

Dr. Han Bing (senior research fellow at the Institute of World Economics and Politics of Chinese Academy of Social Sciences). “TRIPS-plus Rules in International Trade Agreements and Access to Medicines: Chinese Perspectives and Practices.” Global Development Policy Center, Global Economic Governance Iniative. GEGI Working Paper 049, April 2021. JDN. https://www.bu.edu/gdp/files/2021/04/GEGI\_WP\_\_Bing\_FIN.pdf

CHINA’S PRACTICES TO REDUCE THE POTENTIAL NEGATIVE IMPACT OF TRIPS-PLUS RULES ON ACCESS TO MEDICINES

Although China had considered introducing pharmaceutical-related TRIPS-plus rules prior to the Phase One Agreement, there were differences in content from the Phase One Agreement. Furthermore, the Phase One Agreement provides detailed regulations on the patent term extension and patent linkage system. These systems may extend the monopolization period of the original drug and affect access to medicines. Hence, China has taken the following countermeasures to balance the tension between high standards of IPR protection rules and public health. First, China has taken full advantage of the flexibility of the Phase One Agreement to design related systems to avoid abuse of the system. For instance, in terms of patent term extension in the Phase One Agreement, the first two paragraphs of Article 1.12 provide for a patent term extension system, and the third paragraph provides that “The United States affirms that existing US measures afford treatment equivalent to that provided for in this Article.” Hence, when China transforms the provisions of the Phase One Agreement into domestic law, it is necessary to confirm the specific provisions of the existing US measures. Under the Phase One Agreement, the patent term extension system to be established by China shall at least be applicable to “a patent covering a new product, its approved method of use, or a method of making the product.” However, the extension of the patent term required under the Phase One Agreement provides no limitations that can be found under US law where the extension to compensate for delays in the marketing approval procedures applies to only one patent per product (35 U.S. Code § 156 n.d.). Consequently, China faces a number of such problems in transforming the new pharmaceutical patent protection system into domestic law. Second, China has added provisions with respect to the abuse of patent rights and patent open license in the 2020 Patent Law. Article 20 of the 2020 Patent Law provides that: “Patent applications and the exercise of patent rights shall adhere to the principle of good faith. Patent rights shall not be abused to damage the public interest or the lawful rights and interests of any other person. Any abuse of patent rights to preclude or restrict competition, which constitutes a monopolistic act, shall be handled in accordance with the Anti-monopoly Law of the People’s Republic of China.” Competition laws and policies are considered to be able to effectively prevent anti-competitive behaviors such as price collusion, unreasonable restrictions on new technologies, and hindering companies of generics from entering the market, which lead to rising drug prices (Haoran 2019). Currently, China’s regulation of pharmaceutical monopoly is still in its infancy, and the provisions in the Anti-monopoly Law of the People’s Republic of China are not detailed. Therefore, some scholars suggest that drug price monopoly should be taken as the key for identifying the role of the government and the market to improve the operational framework for regulating pharmaceutical monopoly and maintaining the healthy and stable development of the pharmaceutical industry (Jing 2018). Additionally, in order to promote the exploitation and application of patents, Articles 48-52 concerning the open license system are added in the 2020 Patent Law. Article 50 provides that: “Where a patentee voluntarily files a written declaration with the patent administrative department of the State Council, indicating its willingness to permit any entity or individual to exploit its patent and specifying the royalty payment methods and rates, the patent administrative department of the State Council shall make an announcement and implement an open license.” In order to encourage more patentees to voluntarily implement the patent opening license, Paragraph 2 of Article 51 further provides that: “During the period of implementation of the open license, the patent annuity paid by the patentee shall be reduced or waived accordingly.” Whether these newly added provisions will have a positive impact on drug accessibility remains to be proved in practice. Third, China has improved the regulations of a compulsory license system for pharmaceuticals. As early as 1984, China enacted the Patent Law which provided provisions on compulsory licensing, and which has been constantly amended and improved in 1992, 2000 and 2008 Patent Law amendments. In 2012, the China National Intellectual Property Administration issued the revised Measures on Compulsory Patent Licensing to provide detailed provisions on the conditions and procedures for application of various compulsory licensing. From foreign practice, in terms of solutions to domestic public health, the most significant and operable compulsory licensing is the compulsory licensing under national emergencies or abnormal circumstances or for the public interest. Therefore, the Opinions on Reform and Improvement of Policies on Guarantee of Supply and Use of Generic Drugs (the 2018 Opinions) was issued in 2018, which first defines the “abnormal circumstances which threaten the public sanitary and health security” as “national emergencies or abnormal circumstances or for the public interest” (General Office of the State Council 2018). It also provides that the causes of such circumstances included not only an outbreak of major and serious infectious diseases or other abrupt public health events, but also the shortage of drugs for the prevention or treatment of major and serious diseases. “Major and serious diseases” include not only infectious diseases, but also other non-infectious diseases such as cancer. In addition, on the basis of Article 6 of the Measures on Compulsory Patent Licensing, the 2018 Opinions further clarified that the competent departments of the State Council for implementation of compulsory licensing shall be National Health Commission which works together with the Ministry of Industry and Information Technology and National Medical Products Administration. After the signing of the Phase One Agreement, some scholars argued that the patent linkage system and drug data protection may pose obstacles to the implementation of the compulsory patent license, affecting the timely resolution of the public health crisis, and suggested to further improve the compulsory license system for pharmaceutical patents, to build an effective link between the pharmaceutical patent linkage system and patent compulsory license system, and to provide limits and exceptions to the drug data protection (Fuen 2020). Last, China has launched drug pricing and procurement reform. In recent years, China has undertaken reforms around drug prices in order to meet the needs of patients. For instance, the National Healthcare Security Administration (NHSA), established in 2018, will supervise health insurance across both urban and rural populations. The NHSA releases the work plan for the adjustment of the National Reimbursement Drug List (NRDL) each year. Innovative drugs and urgently needed imported drugs with higher prices will be included through negotiations. In 2019, for example, of the 97 drugs successfully negotiated, 70 new drugs had price reductions by an average of 60.7 per cent (news.china.com 2019). The aforementioned Gilead’s Sovaldi, was approved for marketing in China in 2017, priced at 23,000 RMB. In 2019, through NHSA’s negotiations, Sovaldi was included in the NRDL and the price was reduced 4,368 yuan, a reduction of 81 percent (Gilead 2017). Meanwhile, China removed import tariffs on cancer drugs on May 1, 2018 and lowered the value added tax (VAT) on May 3, 2018 (General Office of the State Council 2018). Furthermore, China released the National Pilot Plan of Centralized Drug Procurement in 2019 and launched a new round of drug pricing and procurement reform. The reform was coined the “4+7” procurement reform, which implemented in 4 municipalities (Beijing, Shanghai, Tianjin and Chongqing) and 7 cities (Guangzhou, Shenzhen, Xi’an, Dalian, Chengdu, Xiamen). One of the purposes of the reform is to significantly lower drug prices and reduce the patients’ burden of drug costs.

#### 2] Group their scenarios - Squo solves – the WTO is focused on ensuring fair, accessible trading conditions internationally – that ensures pharmaceutical accessibility.

Ott 21’ Haley Ott, “New World Trade Organization chief on reviving U.S. ties and addressing the COVID crisis,” CBS News interview. Published March 12, 2021. Accessed 8/10/2021; Omar E. https://www.cbsnews.com/news/world-trade-organization-wto-ngozi-okonjo-iweala-us-ties-covid-vaccine-economies-trade/.

London — Dr. Ngozi Okonjo-Iweala has taken the reins as the new Director-General of the World Trade Organization at what critics are calling a crisis moment for the global body. The organization brings countries around the world together to fairly manage trade, but it's facing a rise in nationalism and protectionism, structural issues that have made it difficult to settle disputes among members, vital negotiations about sustainability that have gone unresolved for years, and an international pandemic emergency. Okonjo-Iweala, a former finance minister from Nigeria who worked for decades at the World Bank, is the first African and the first woman to hold the position of Director-General — a role that will see her, among many other things, help to facilitate agreements among the WTO's 164 member states. CBS News' Haley Ott spoke to her about the major issues facing the organization, and the world, today. The interview has been edited for length and clarity. Haley Ott: For many Americans, the first time they heard of the World Trade Organization was when former President Trump threatened to leave it. Why is the WTO important, and in a time of increasing nationalism, how do you keep it relevant? Ngozi Okonjo-Iweala: Well, thank you, Haley. The WTO is important because its rules underpin the multilateral trading system, meaning it provides **a forum** where **every country can** come and **discuss and negotiate trade** agreements, and also **a place for dispute settlement**. You know, in the old days, we used to have trade wars. Now we have a place where countries can come and settle disputes they have among them. President Biden has rescinded America's threat to leave the WTO, but he hasn't completely abandoned President Trump's approach to trade. He's said that his policy would prioritize Americans and American workers. Does that worry you? Ngozi Okonjo-Iweala: Not at all. And actually, I want to commend the United States because it never actually left the WTO. It had problems with it, but the U.S. paid its share of the budget and still remained a member. And I'm so glad that President Biden has stated that he wants to revive multilateralism and support of the WTO is one of the ways to do that. China is a member of the World Trade Organization, and it's been accused of using WTO structures to unfairly benefit itself to the detriment of some other members, including the United States. What do you say to critics who say that the WTO has been unable to ensure fair global trade in regards to China? Ngozi Okonjo-Iweala: Well, the WTO **was created to ensure a level playing field** among all trading nations, transparency, balance, so that the private sector can feel that when they are participating, it's fair. Now, WTO members have issues that they want to settle with each other. I think that we will work hard at the secretariat to support them so that these issues can be dealt with. **We** do **have** some **rules about making sure** that **unfair subsidies are not given**? We have to look and see, are those rules still fit for purpose in this modern age, with things evolving? Do we need to make new rules to deal with that? One of the main subjects facing the World Trade Organization today is fish, how much certain countries should be able to fish in order to keep global stocks secure. Negotiations have been going on for years, and you've stated that it's one of your goals to come up with an agreement by the end of this year. What do you say to those who say this issue of fish is a real test for the WTO on its ability to deliver on an issue that really matters to people around the world and that, if it's not able to, it as an organization may not be fit for purpose? Ngozi Okonjo-Iweala: I agree. It's as simple as that. You know, **it's unacceptable to have negotiations** on an issue going on **for 20 years**, and I've said 20 years is enough. **We need to get it done** because this is about sustainability of our oceans. It's contributing to the sustainable development goals that every country agreed on, including the United States. We have to look at over capacity subsidies in fishing that are leading to overfishing and illegal fishing so that our fish stocks will be renewed and sustainable, our oceans will be sustainable for our fish. You've said that trade and the WTO can help the world address the coronavirus pandemic, which has decimated economies globally. How can trade help deal with the pandemic? Ngozi Okonjo-Iweala: It's unconscionable that there are countries in the world, **over 130**, **who have not** even **started vaccinating** any of their people. It's in the self-interest of the whole world to have everyone vaccinated. So we can help work with manufacturers to see what more sites they can **bring it in developing countries** and emerging markets **to increase supply**. The WTO can also look at trade. How can trade help with the recovery? Are there areas where we can liberalize trade more among our members so that we can trade? And that will lift up some countries to contribute to the recovery. Some countries have suggested waiving some intellectual property rights to make new technologies accessible for manufacture around the world. Would you support that policy? Ngozi Okonjo-Iweala: Let me say this, Haley. People need to understand what is behind this demand. Because poor countries watched during the HIV-AIDS crisis, they could not get hold of drugs. They were too expensive. Ten thousand dollars. Unaffordable. And people died. It was 10 years before they were able to get access to produce these drugs, generics, to save lives. That memory hurts. The second issue is the fact that the H1N1 pandemic or epidemic that occurred in 2008/9, rich countries bought up all the vaccines and poor countries had no access. So that lies behind this desire to have the intellectual property waiver, **for all to have access**. Now, that debate is going on. It will be decided among members. But we need to know why it's important and we need to come to some sustainable agreement. But for now, I've advocated what I've called a third way, which is **we need to boost manufacturing** right away so that we can have increased supplies. So **it's not one or the other**. I've always said, we can walk and chew gum. Finally, it's Women's History Month. You are the first woman to be the head of the World Trade Organization and the first African person. What does that mean to you and what obstacles still need to be addressed? Ngozi Okonjo-Iweala: Well, it means a lot to me. I love being the first female and the first African, but I always tell people that's not the most important fact. The fact is that the WTO is facing many challenges and it needs the most competent person to help it come out of those challenges and find solutions. So that's the important thing. And, well, you know, I'm humbled that people have selected not only the first African and the first female, but someone they believe has the competence to try and deliver.

#### 3] Turn access and innovation - IP protections motivate innovators to take risks – that triggers tech prolif in medicine and related fields – guarantees long-term development due to continuous incentives. The aff decreases access in the long-run because innovators won’t make drugs.

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With the belief that medicines should be “public goods,” there is literally no support in some quarters for the application of the WTO TRIPS Agreement to IP rights in medicines. Any protection of the IP rights in such goods is viewed as a violation of human rights and of the overall public interest. This view, though, does not reflect the practical reality of a world in which many medicines would simply **not exist** if it were not for the existence of IP rights and the protections they are afforded. Technically, IP rights are exceptions to free trade. A long‐​standing general discussion in the WTO has been about when these exceptions to free trade should be allowed and how far they should be extended. The continuing debate over IP rights in medicines is only the most emotional part of this overall conversation. Because developed countries have, historically, been the principal sources of IP rights, this lengthy WTO dispute has largely been between developed countries trying to uphold IP rights and developing countries trying to limit them. The debate over the discovery and the distribution of vaccines for COVID-19 is but the latest global occasion for this ongoing discussion. 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 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