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1AC – Adv – Vaccine Diplomacy

American vaccine diplomacy is failing in Latin America – that allows for Chinese influence. Only the plan can return the world back to a US led order.

Carman and Carl 6/15 [Ezequiel and Joseph; 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; 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," Global Americans; 6/15/21; https://theglobalamericans.org/2021/06/a-u-s-vaccine-diplomacy-strategy-for-latin-america-and-the-caribbean/] Justin

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. Brazil remains one of the countries **hardest hit by the COVID-19 pandemic**. Despite President Jair Bolsanaro's anti-science tendencies and hawkish stance towards Beijing, however, his government has still proven susceptible to the influence of China. Earlier this year, a New York Times report brought attention to the Bolsonaro government's arrangement to allow Huawei, the Chinese telecommunications giant, to participate in upcoming biddings for contracts to construct Brazil's 5G network. (Under the Trump Administration, Brazil had been one of the 50 countries to agree to the Clean Network Initiative—an agreement that committed signatories to forbidding Huawei from being involved in their 5G networks, due to national security concerns.) The announcement came after Brazil's telecommunications minister, Fábio Faria, traveled to Beijing to meet with Huawei executives. Recounting his trip, Faria was quoted as saying that he had taken "advantage of the trip to ask for vaccines." This development aligns with recent warnings from the U.S. Southern Command Chief Admiral Craig Faller, who claimed, during a U.S. Senate Armed Services Committee hearing, that China was using its vaccine leverage to push for Huawei's integration into Latin America's 5G networks. In the absence of Washington, several countries have **increased their engagement with China and Russia** (or have at least been pressured to). **Paraguay and Guyana**, for instance, have been pushed by China to switch their official diplomatic recognition from Taiwan (Republic of China, or ROC) to China (People's Republic of China, or PRC) and to increase bilateral trade relations. **Colombia**, historically one of Washington's closest allies in Latin America, uncharacteristically applauded Beijing's efforts to promote human rights at the United Nations Human Rights Council, only one week after it received half a million doses of a Chinese-made vaccine. In **Mexico**, Beijing and Moscow also scored points; after securing a second shipment of Chinese vaccines, Mexico announced it would expand its "strategic partnership" with China. With respect to Russia, when (AMLO) tested positive for COVID-19 in January, he received a call from Russian President Vladimir Putin, wishing his Mexican counterpart a quick recovery. Shortly thereafter, AMLO announced that Mexico would receive a shipment of 24 million Russian vaccines and that he had invited Putin to visit Mexico, which would mark the Russian leader's

first visit to the country in nearly a decade. These developments are especially relevant when considering the fact that, before President Biden announced the sharing of the U.S. supply of AstraZeneca vaccines with Mexico, he had initially rejected AMLO's call for assistance. In **Bolivia**, Putin has curried favor with President Luis Arce. President Arce's political leanings are reminiscent of those of his predecessor, Evo Morales, who had an especially close relationship with Moscow; it would be reasonable to expect, therefore, that Arce may be similarly keen to deepen Moscow's relationship with La Paz. After donating a large supply of vaccines to Bolivia, Putin sought out Arce to discuss the possible revival of several key Russian projects in the country: among them, the reactivation of a suspended nuclear power plant project, Russian development of Bolivia's natural gas reserves, and investments in the country's extensive lithium deposits (lithium being a mineral key to the global transition to clean energy, as it is a vital component in the production of high capacity batteries in both civilian and military hardware). In 2019, Russian businesses were beaten by other firms in the rush to invest in Bolivia's nascent lithium industry; however, Arce has recently announced plans for new lithium projects that have received interest from both Russian and American companies. Throughout **Latin America** and the **Caribbean**, Russia has continued to sign vaccine deals in an effort to increase its influence. Russia's vaccine diplomacy has primarily been a soft power push, unlike China's more brazen "wolf warrior" diplomacy. Nevertheless, it represents a re-establishment of a foothold in the region that Russia (and its predecessor, the USSR) has not boasted since the Cold War. While some countries, like Mexico and Bolivia, appear genuinely interested in deepening their ties with U.S. geopolitical rivals, it is widely recognized that most other nations of Latin America and the Caribbean are being squeezed politically by vaccines. If Latin America is not offered a **practical alternative**, it will likely continue to **conduct business with Moscow and Beijing,** thus incurring more debts of gratitude to global powerhouses eager to expand their economic and political influence through vaccine diplomacy. A forward-thinking strategy To this point, the U.S. has been **significantly outpaced by China and Russia** when it comes to building and strengthening relations with its Latin American and Caribbean neighbors. The dynamic surrounding COVID-19 vaccine distribution is evocative of another era of recent history when the U.S. abandoned the suffering of the developing world for the sake of profit-maximizing pharmaceutical companies. With Latin America and the Caribbean being the region hardest hit in the world by the COVID-19 pandemic—much as Africa was at the height of the AIDS pandemic—the **U.S. is only undermining its moral standing** and **regional influence** by failing to more readily extend a helping hand. As the war against COVID-19 reaches a détente in the U.S., **the Biden administration should make this issue a top priority**. First, the U.S. needs to aggressively push its Western partners to back the IP patent waiver at the WTO in order to push forward a patent proposal that will help increase vaccine production capacity worldwide. Doing so will **demonstrate to the world that Washington has the political will** to defy the wishes of the powerful pharmaceutical industry and and re-establish its leadership role among the Western powers. Second, in order to counter its geopolitical rivals and restore its moral standing, the Biden administration will **need to be more "present"** in regional vaccine distribution, demonstrated through a vigorous campaign of public diplomacy. Unlike their American counterparts, Chinese and Russian diplomatic officials are always present whenever a new shipment of their vaccines enter a given country. These arrivals have frequently been met with fanfare and attention from the Latin American press—coverage that, in turn, helps to shape public opinion regarding Sino-Russian influence and elevate the political stature of the two revisionist powers among the Latin American electorate. Adopting this strategy would help convey the message that vaccines are coming from the American people, rather than from faceless multinational corporations, and help rebuild moral standing for the U.S. among Latin American and Caribbean citizenries. Public-private partnerships with these companies would allow the U.S. to obtain more accountability with respect to international vaccine distribution; previous agreements have proven successful in achieving similar public perceptions of transparency and accountability.

It's not over – Latin America is still skeptical of Chinese aid but lack of US presence means it's the only choice – try or die to capitalize on this weakness.

Kneip 8/10 [Lucie; Student at the University of Notre Dame studying Political Science and Global Affairs. Her research interests include U.S. foreign policy and democratization, civil and criminal warfare, and the intersection of religion and politics; "China's Vaccine Diplomacy in Latin America," The Diplomat; 8/10/21; https://thediplomat.com/2021/08/chinas-vaccine-diplomacy-in-latin-america/] Justin

Chinese **vaccine diplomacy in Latin America has skyrocketed in recent months**. In **preparation** for the Copa America tournament, Sinovac donated 50,000 vaccines to the South American football governing body CONMEBOL. Beijing is investing in vaccine diplomacy to enhance its **regional soft power**. It's time for the United States to pay more attention to a region that it often takes for granted.

Latin America and the Caribbean have registered over a million deaths from COVID-19, and new variants continue to drive economic shutdowns in Colombia and Trinidad and Tobago. While the United States' $4 billion commitment to the World Health Organization's COVAX initiative outstrips every other international donor, logistical obstacles and Western pharmaceutical companies' need to prioritize U.S. government contracts have slowed down vaccine distribution.

Meanwhile, China has raced to fill the vaccine gap, and they've been successful. According to the Council of Americas, the majority of all vaccines administered in Latin America are sourced from Beijing. True, **Uruguay, Costa Rica,**

and the Dominican Republic have questioned the **efficacy of Chinese Sinovac inoculations**, and a Chilean study found that Sinovac was only 54 percent effective in preventing contagion, while Pfizer and Moderna record much higher efficacy. Yet the speed and scale of Beijing's vaccine campaign has forced governments to **accept** the less-effective Chinese vaccine; there are **few alternatives on offer.**

President Xi Jinping is already using vaccine diplomacy to **advance other Chinese interests**. China has pressured **Honduras** and **Paraguay** to sever diplomatic ties with Taiwan in order to receive Chinese vaccines, and successfully pushed **Brazil** to reverse its ban on telecom giant Huawei's 5G network project.

Vaccine diplomacy is only the newest instance of increased Chinese trade and investment in Latin America. Meanwhile, Washington continues to entangle itself in exploits in distant regions rather than prioritizing ties in its own neighborhood. **Latin American policymakers are growing increasingly disillusioned with Washington's** inattention to regional development and progress. Honduran chief cabinet coordinator Carlos Alberto Madero sums up the increasing frustration: "The Honduran people… see that China is helping its allies and we start to ask ourselves why **ours are not helping us**." The pandemic is still raging in the region, and Washington has an opportunity to rebound by increasing the pace of vaccine donations.

Chinese influence ends the liberal order.

Cossu 7/16 [Elena; Early-stage researcher for the MSCA Innovative Training Network FATIGUE, PhD candidate in economics at Corvinus University of Budapest and recently finished her year as a visiting researcher at University College London and at the European Bank for Reconstruction and Development. Elena comes from a place culturally in between Germany and Italy. She has also had experience working in Greece, France, Latin America, Thailand, and Hungary. Elena is passionate about political and economic inequalities between states, and about understanding what prevents the political and economic convergence of different peripheries of the world; "In Latin America, Chinese vaccine diplomacy is directly challenging US's declining authority," Scroll.in; 7/16/20; https://scroll.in/article/1000114/in-latin-america-chinese-vaccine-diplomacy-is-directly-challenging-uss-declining-authority] Justin

It is impossible to enter a room these days without talking about Covid-19 vaccines. If, however, you happened to be talking to Latin Americans, you would notice an **unusual pattern**: considerable **gratitude towards China for its vaccine rollout.**

It is gratitude, moreover, that is very hard to find in Europe or the United States. The reason is simple: the number of vaccines **provided by China to countries in need is truly impressive.**

During a global vaccine shortage, China has been able to provide 252 million doses to the world. This includes the majority of total doses made available to Latin American countries.

Six national or regional entities can produce and distribute a consistent number of vaccines: Europe, the United States, China, South Korea and India. China has distributed the highest number, and almost half (42%) of these have gone outside its own country.

As of May, no other country can match this figure. Most countries are focused primarily on achieving their own herd immunity first.

Even more striking is the fact that the United States is **exporting a mere 1% of its vaccines**, almost **solely to Canada and Mexico**. In May, the US pledged to increase its exported doses by 100 million by the end of the year. Yet even if it had achieved this goal, it would not be even half of the Chinese figure. Chinese vaccine diplomacy in Latin America is **challenging US authority in the region, at a time when US influence is in visible decline.**

Declining **'Washington Consensus'**

The rationale behind American policy towards Latin America has long been that unstable neighbours (especially Communist ones) destabilise the region. In extreme cases, this has resulted in US involvement in various regime changes in Latin America. But the more frequently used **mechanism of influence, especially since the end of the Cold War, has been economic diplomacy**.

The main tool for this has been the infamous Washington Consensus. The logic of this was very simple: a state-led economic model is a bad thing. An "economist approved" liberal model should therefore solve all Latin America's problems. It did not work out like that.

Despite good intentions, the International Monetary Fund and World Bank programmes did not alleviate Latin America's problems. On the contrary, the Washington Consensus is often cited as having fuelled a resurgence of populism in Latin America. It is also held responsible for the succession of left-wing governments in the 1990s known as the Pink Tide.

Five of the nations subject to the Washington Consensus (Argentina, Brazil, Chile, Mexico and Venezuela) even displayed authoritarian tendencies. In the mid-2010s the region experienced a so-called Blue Tide: the rise of liberal governments to counterbalance the previous left-wing ones. This phenomenon was also considered a long-term consequence of the chronic failure of US economic diplomacy on the continent.

Today, Latin America still struggles with political instability and high levels of inequality. The United States' top-down approach has failed. What is more, cooperation has dramatically declined because of the Trump administration's approach and the US's own internal problems.

Rising Chinese power

In this context, China has seen the **Covid crisis as an opportunity to reinforce** its **ambitions** as a rising power trying to **exert more influence in the international order.**

A scheduled $8 trillion for project infrastructure in sixty-eight countries through the New Silk Road programme vividly captures its approach. Brazil, Venezuela, Ecuador and Bolivia already have partnership projects with China and Mexico is considering joining one.

The US and Chinese tools for economic diplomacy are very similar in practice, yet fundamentally different in philosophy.

The US **strategy is based on individualism**: We as a nation will be the most **economically successful by working hard to realise our individuality**... We will export the idea that this is the best possible system through soft power and economic cooperation.

In contrast, Chinese economic diplomacy is an extension of a collective dream where individuals work hard to **realise the success of the collectivity: everybody in their community and the world.**

In the context of Latin America, this **competition between two philosophical approaches is especially risky for the United States**. Too many factors **favour the Chinese** way of thinking: the inward-looking diplomatic approach of the United States during the Trump administration; the perennial flirtation of some Latin American countries with various forms of socialism; and the failure of the US's own economic and other (capitalist) strategies there.

Old international order

In this power vacuum, **the rise of China during a crisis situation might push the world toward a new international bipolar order**. Latin America's **enthusiasm** for Chinese vaccines might **constitute the first grouping of countries genuinely lost to US influence.**

Latin America is not just showing an **interest in vaccine rollout. It is also showing how the old dichotomy of capitalism versus socialism is becoming increasingly redundant in some parts of the world.**

Analogous to the fading of the US-Russia dichotomy, rising Chinese influence in Latin America shows countries becoming more **open-minded towards different economic and social narratives**. They are less concerned with "good" and "bad" and more concerned with the **concrete opportunities different choices offer.**

Collapse of the liberal order causes extinction.

Yulis 17 [Max; Major in PoliSci, Penn Political Review; "In Defense of Liberal Internationalism," Penn Political Review; 4/8/17; http://pennpoliticalreview.org/2017/04/in-defense-of-liberal-internationalism/] // Re-Cut Justin

Over the past decade, international headlines have been bombarded with stories about the **unraveling** of the **post-Cold War world order**, the creation of **revolutionary smart devices** and **military technologies**, the rise of militant **jihadist organizations**, and **nuclear proliferation**. Indeed, times are paradoxically promising and alarming. In relation to treating the world's ills, fortunately, there is a **capable hegemon**– one that has the ability to revive the world order and traditionally hallmarked human rights, peace, and democracy. **The United States**, with all of its shortcomings, had crafted an **international agenda** that significantly **impacted the post-WWII landscape**. Countries **invested** their ambitions into **security communities**, **international institutions**, and **international law** in an effort to **mitigate** the chances of a nuclear catastrophe or another World War. The horrors and atrocities of the two Great Wars had traumatized the global community, which spurred calls for peace and the creation of a universalist agenda. Today, the world's fickle and declining hegemon still has the ability, but not the will, to uphold the world order that it had so carefully and eagerly helped construct. Now, the stakes are too high, and there must be a mighty and willing global leader to lead the effort of diffusing democratic ideals and reinforcing stability through both military and diplomatic means. To do this, the United States must abandon its insurgent wave of isolationism and protectionism, and come to grips with the newly transnational nature of problems ranging from climate change to international terrorism.

First, the increase in intra-state conflict should warrant concern as many countries, namely in Africa and the Middle East, are seeing the total collapse of civil society and government. These power vacuums are being filled with increasingly ideological and dangerous tribal and non-state actors, such as Boko Haram, ISIS, and Al-Shabaab. Other bloody civil wars in Rwanda, Sudan, and the Congo have contributed to the deaths of millions in the past two decades. As the West has seen, however, military intervention has not been all that successful in building and empowering democratic institutions in the Far East. A civil crusade, along with the strengthening of international institutions, may in fact be the answer to undoing tribal, religious, and sectarian divisions, thereby mitigating the prospects of civil conflict. During the Wilsonian era, missionaries did their part to internationalize the concept of higher education, which has contributed to the growth of universities in formerly underdeveloped countries such as China and South Korea.[1] In addition, the teachings of missionaries emphasized the universality of humanity and the oneness of man, which was antithetical to the justifications for imperialism and the rampant sectarianism that plagued much of the Middle East and Africa.[2] Seeing that an **increase** in the **magnitude of human casualty** is becoming more of a reality due to advancements in **military technology and the increasing outbreaks of civil war**, international **cooperation** and the **diffusion** of norms that highlight the importance of stable **governance, democracy**, and **human rights** is the only recourse to address the rise in sectarian divides and civil conflicts. So long as the **trend** of the West's desire to look inward continues, it is likely that nation states **mired** in conflict will devolve into ethnic or tribal enclaves bent on **relying on war to maintain their legitimacy and power**. Aside from growing sectarianism and the increasing prevalence of failed states, an even more daunting threat come from weapons that transcend the costs of conventional warfare.

The problem of **nuclear proliferation** has been around for **decades**, and on the eve of President Trump's inauguration, it appeared that Obama's lofty goal of advocating for **nonproliferation would no longer be a priority** of American foreign policy.[3] In addition, now that the American president is threatening to **undo much of the United States' extensive network of alliances**, formerly non-nuclear states may be forced to **rearm themselves.** Disarmament is central to liberal internationalism, as was apparent by the Washington Naval Treaty advocated by Wilson, and by the modern CTBT treaty. The reverse is, however, being seen in the modern era, with cries coming from **Japan and South Korea to remobilize** and begin their own **nuclear weapon programs**.[4] A world with more nuclear actors is a formula for chaos, especially if nuclear weapons become mass-produced. Non-state actors will increasingly eye these nuclear sites as was the case near a Belgian nuclear power plant just over a year ago.[5] If any government commits a serious misstep, access to **nuclear weapons on the behalf of terrorist and insurgent groups** will become a reality, especially if a civil war occurs. States with nuclear weapons require domestic stability and strong security, which is why states such as Israel, North Korea, and Pakistan could be in serious trouble in the event of a domestic uprising or military coup. The disarmament of all states is essential for human survival, and if it is not achieved, then a world **full of nuclear weapons** and an international system guided by realpolitik could give rise to **nuclear warfare**. In today's world, nuclear weapons leave all states virtually defenseless. But, for nuclear deproliferation to become a cornerstone of the global agenda, a **pacifying and democratic power must rise to the limelight to advocate the virtues of peace, stability, and human rights.**

Yes transition wars---both sides miscalculate.

Min-hyung **Kim 20**. Department of Political Science and International Relations, Kyung Hee University, Seoul, South Korea. "A real driver of US–China trade conflict: The Sino–US competition for global hegemony and its implications for the future" Emerald Insight. 02-04-2019.
https://www.emerald.com/insight/content/doi/10.1108/ITPD-02-2019-003/full/html // Re-Cut Justin

Underlying these arguments for an inevitable war between the two superpowers is PTT. PTT originally formulated by Organski (1958) posits that **war is likely** when the power of the dominant state in the international system (i.e. hegemon) is **declining** and that a dissatisfied rising challenger **substantially reduces the power gap between the hegemon and itself.** Unlike balance of power theory, PTT argues that the war is most likely when there is near power parity between a dominant state and a rising and dissatisfied challenger (Organski and Kugler, 1980, pp. 19-20)[5]. A rising power here is generally dissatisfied with the existing international order and **initiates war against a declining hegemon in order to impose orders that are more favorable to itself** (Organski 1958, pp. 364-367). Layne (2018, p. 110) put these power transition dynamics quite succinctly as follows: "Over time, however, the relative power of states changes, and eventually the international order no longer reflects the actual distribution of power between or among the leading Great Powers. When that happens, the legitimacy of the prevailing order is called into question, and it will be challenged by the rising power(s)." And when the balance of power between a dominant state and a rising challenger changes sufficiently, a new order replaces an old one typically **by a hegemonic war** (2018, p. 104). Paying close attention to the **growing Sino–US competition** over hegemony in the twenty-first century, therefore, Shirk (2007, p. 4), China specialist, argues that "History teaches us that rising powers are likely to provoke war." On the other hand, scholars like Gilpin (1981) contend that the power transition war between great powers is likely to occur when a hegemonic state whose power is declining due to imperial

overstretch[6] views "**preventive war as the most attractive means of eliminating the threat** posed by challengers" (Ned Lebow and Valentino, 2009, p. 391), although they do acknowledge that there might be some "ways to prolong the period of its power preponderance vis-à-vis the rising challenger, so that the rapidly rising power will not dare to challenge the hegemonic leadership" (Kim and Gates, 2015, p. 221). In this case, the initiator of war is a declining hegemon, rather than a rising challenger. The declining hegemon who fears a rising challenger's overtaking its power in the near future **sees war as a better option** than other options of maintaining its hegemony such as reducing its commitments abroad and appeasing a rising challenger.

1AC – Adv – Pandemics

Only the plan can solve covid access – inequalities heighten the risk of mutations and uneven development – neg objections miss the boat.

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According to Duke Global Health Innovation Center, which monitors COVID-19 vaccine purchases, **rich nations representing** just 14 per cent of the world population have bought up to **53 per cent of the most promising vaccines** so far. As of 4 July 2021, the **high-income countries** (HICs) purchased more than half (6.16 billion) vaccine doses sold globally. At the same time, the low-income countries (**LICs**) received only 0.3 per cent of the vaccines produced. The low and middle-income countries (LMICs), which account for **81 per cent of the global adult population**, purchased **33 per cent**, and COVAX (COVID-19 Vaccines Global Access) has received 13 per cent.10 Many HICs bought enough doses to vaccinate their populations several times over. For instance, Canada procured 10.45 doses per person, while the UK, EU and the US procured 8.18, 6.89, and 4.60 doses per inhabitant, respectively.11

Consequently, there is a **significant disparity between HICs and LICs** in vaccine administration as well. As of 8 July 2021, **3.32 billion vaccine doses had been administered globally**.12 Nonetheless, only **one per cent** of people in LICs have been given at least **one dose**. While in HICs almost one in four people have received the vaccine, in LICs, it is one in more than 500. The World Health Organization (WHO) notes that about 90 per cent of African countries will miss the September target to vaccinate at least 10 per cent of their populations as a third wave looms on the continent.13 South Africa, the most affected African country, for instance, has vaccinated less than two per cent of its population of about 59 million. This is in contrast with the US where almost 47.5 per cent of the population of more than 330 million has been fully vaccinated. In Sub-Saharan Africa, **vaccine rollout remains the slowest in the world**. According to the International Monetary Fund (IMF), at current rates, by the end of 2021, a massive **global inequity** will continue to exist, with Africa still **experiencing meagre vaccination** rates while other parts of the world move much closer to complete vaccination.14

This vaccine inequity is not only **morally indefensible** but also **clinically counter-productive**. If this situation prevails, LICs could be **waiting until 2025 for vaccinating** half of their people. Allowing most of the world's population to go unvaccinated will also spawn **new virus mutations**, more **contagious viruses** leading to a steep rise in COVID-19 cases. Such a scenario could cause twice as many deaths as against distributing them globally, on a priority basis. Preventing this humanitarian catastrophe requires removing all barriers to the production and distribution of vaccines. TRIPS is one such barrier that prevents vaccine production in LMICs and hence its equitable distribution.

TRIPS: **Barrier to Equitable Health Care Access**

The opponents of the waiver proposal argue that IPR are not a significant barrier to equitable access to health care, and existing TRIPS flexibilities are sufficient to address the COVID-19 pandemic. However, **history suggests the contrary**. For instance, when South Africa passed the Medicines and Related Substances Act of 1997 to address the HIV/AIDS public health crisis, nearly **40 of world's largest and influential pharma companies took the South African**

government to court over the violation of TRIPS. The Act, which invoked the compulsory licensing provision, allowed South Africa to produce affordable generic drugs.15 The Big Pharma also lobbied developed countries, particularly the US, to put bilateral **trade sanctions against South Africa**.16

Similarly, when Indian company Cipla decided to provide generic antiretrovirals (ARVs) to the African market at a lower cost, Big Pharma retaliated through **patent litigations in Indian and international trade courts and branded Indian drug companies as thieves**.17 Another instance was when Swiss company Roche initiated patent infringement proceedings against Cipla's decision to launch a generic version of cancer drug, "erlotinib". Though the Delhi High Court initially dismissed Roche's appeal by citing "public interest" and "affordability of medicines," the continued to pressure the generic pharma companies over IPR. 18 Likewise, Pfizer's aggressive patenting strategy prevented South Korea in developing pneumonia vaccines for children.19

A recent document by Médecins Sans Frontières (MSF), or Doctors Without Borders, highlights various instances of how **IP hinders manufacturing and supply of diagnostics, medical equipment**, **treatments** and **vaccines** during the COVID-19 pandemic. For instance, during the peak of the COVID-19 first wave in Europe, Roche rejected a request from the Netherlands to release the recipe of key chemical reagents needed to increase the production of diagnostic kits. Another example was patent holders threatening producers of 3D printing ventilators with patent infringement lawsuits in Italy.20 The MSF also found that patents pose a severe threat to access to affordable versions of newer vaccines.21

The opponents of the TRIPS waiver also argue that IP is the **incentive for innovation and if it is undermined**, future innovation will **suffer**. However, most of the COVID-19 **medical innovations**, particularly vaccines, are developed with **public financing assistance**. Governments spent billions of dollars for COVID-19 vaccine research. Notably, out of $6.1 billion in investment tracked up to July 2021, 98.12 per cent was public funding.22 The US and Germany are the largest investors in vaccine R&D with $2.2 billion and $1.5 billion funding.

Private companies received 94.6 per cent of this funding; Moderna received the highest $956.3 million and Janssen $910.6 million. Moreover, governments also invested $50.9 billion for advance purchase agreements (APAs) as an incentive for vaccine development. A recent IMF working paper also notes that public research institutions were a key driver of the COVID-19 R&D effort—accounting for 70 per cent of all COVID-19 clinical trials globally.23 The argument is that vaccines are developed with the support of substantial public financing, hence there is a public right to the scientific achievements. Moreover, private companies reaped billions in profits from COVID-19 vaccines.

One could argue that since the US, Germany and other HICs are spending money, their citizens are entitled to get vaccines first, hence vaccine nationalism is morally defensible. Nonetheless, it is not the case. The TRIPS Agreement includes several provisions which mandates promotion of technology transfer from developed countries to LDCs. For instance, Article 7 states that "the protection and enforcement of IP rights should contribute to the promotion of technological innovation and the transfer and dissemination of technology, to the mutual advantage of producers and users of technical knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations."24 Similarly, Article 66.2 also mandates the developed countries to transfer technologies to LDCs to enable them to create a sound and viable technological base. The LMICs opened their markets and amended domestic patent laws favouring developing countries' products against this promise of technology transfer.

Another argument against the proposed TRIPS waiver is that a waiver would not increase the manufacturing of COVID-19 vaccines. Indeed, one of the **significant factors contributing to vaccine inequity** is the **lack of manufacturing capacity** in the global south. Further, a TRIPS waiver will not automatically translate into improved manufacturing capacity. However, a waiver would be the first but essential step to **increase manufacturing capacity** worldwide. For instance, to **export COVID-19 vaccine-related products**, countries need to ensure that there are no IP restrictions at both ends – exporting and importing. The market for vaccine materials includes consumables, single-use reactors bags, filters, culture media, and vaccine ingredients. Export blockages on raw materials, equipment and finished products harm the overall output of the vaccine supply chain. If there is no TRIPS restriction, more governments and companies will invest in **repurposing their facilities**.

Similarly, the arguments such as that **no other manufacturers can carry out the complex manufacturing process** of COVID-19 vaccines and generic manufacturing as that would jeopardise quality, have also been proven **wrong** in the past. For instance, in the early 1990s, when Indian company Shantha Biotechnics approached a Western firm for a technology transfer of Hepatitis B vaccine, the firm responded that "India cannot afford such high technology vaccines… And even if you can afford to buy the technology, your scientists cannot understand recombinant technology in the least."25 Later, Shantha Biotechnics **developed its own vaccine at $1 per dose**, and the UNICEF (United Nations Children's Emergency Fund) mass inoculation programme uses this vaccine against Hepatitis B. In 2009, Shantha sold over 120 million doses of vaccines globally.

India also produces **high-quality generic drugs for HIV/AIDS and cancer treatment** and markets them across the globe. Now, a couple of Indian companies are in the **last stage of producing mRNA** (Messenger RNA) vaccines.26 Similarly, Bangladesh and Indonesia claimed that they could **manufacture millions of COVID-19 vaccine doses a year** if pharmaceutical companies share the know-how.27 Recently, Vietnam also said that the

country could **satisfy COVID-19 vaccine production** requirements once it obtains vaccine patents.28 Countries like the United Arab Emirates (UAE), Turkey, Cuba, Brazil, Argentina and South Korea have the capacity to produce high-quality vaccines but lack technologies and know-how. However, Africa, Egypt, Morocco, Senegal, South Africa and Tunisia have limited manufacturing capacities, which could also produce COVID-19 vaccines after repurposing.

Moreover, COVID-19 vaccine IPR runs **across the entire value chain** – vaccine development, production, use, etc. A mere patent waiver may not be enough to address the issues related to its production and distribution. What is more important here is to share the technical **know-how and information** such as trade secrets. Therefore, the existing TRIPS flexibilities, such as **compulsory and voluntary licensing, are insufficient** to address this crisis. Further, compulsory licensing and the domestic legal procedures it requires is cumbersome and not expedient in a public health crisis like the COVID-19 pandemic.

India's Role in Ensuring Vaccine Equity India's response to COVID-19 at the global level was primarily two-fold. First, its proactive engagements in the regional and international platforms. Second, its policies and programmes to provide therapeutics and vaccines to the world. Since the beginning of the COVID-19 pandemic, India has been advocating international cooperation and policy coordination in fighting it. For instance, in April 2020, India co-sponsored a UN resolution that called for fair and equitable access to essential medical supplies and future vaccines to COVID-19. Later, in October 2020, India also put pressure on developed countries with a joint WTO proposal for TRIPS waiver. India's Vaccine Maitri initiative also aims vaccine equity. As of 29 May 2021, India has supplied 663.698 lakh doses of COVID-19 vaccines to 95 countries. It includes 107.15 lakh doses as a gift to more than 45 countries, 357.92 lakh doses by commercial sales, and 198.628 lakh doses to the COVAX facility.29 The COVAX initiative aims to ensure rapid and equitable access to COVID-19 vaccines for all countries, regardless of their income level. India has decided to supply 10 million doses of the vaccine to Africa and one million to the UN health workers under the COVAX facility. India has also removed the IPR of Covaxin that would help platforms like C-TAP once WHO and developed countries' regulatory bodies approve the vaccine. If agreed, the waiver would benefit India in many ways. First, more vaccines will help the country to control the pandemic and its recurring waves. Second, it will be a boost to India's pharma industry, particularly the generic medicine industry. According to the Biotechnology Innovation Organization, 834 unique active compounds are involved in the current R&D of COVID-19 therapeutics, vaccines, and diagnostics. It means that thousands of new patents are awaited, and that will hinder India's ability to produce COVID-19 related medical products. Only through a waiver, this challenge can be addressed. Similarly, scientists note that mRNA is the future of vaccine technology. However, manufacturing mRNA vaccines involves complex processes and procedures. Only a very few Indian manufacturers have access to this technology; however, that too is limited. Once Indian companies have access to mRNA technology, it will help country's generic medicine industry and boost India's economy. Therefore, even if the WTO agrees on a waiver for a period shorter than proposed, India should accept it. In addition, mRNA vaccines can be produced in lesser time compared to the traditional vaccines. While traditional vaccines' production takes four to five months, mRNA needs only six to eight weeks. Access to this technology will be vital for India in expediting the fight against COVID-19 and future pandemics. Finally, a waiver may strengthen India's diplomatic soft power. At present, what hinders India's Vaccine Maitri initiative is the scarcity of vaccines at home. On the other hand, China is increasing its standing in Africa, South America and the Pacific through vaccine diplomacy. The WHO approval of the Chinese vaccines and lack of access to vaccines by most developing countries, opens up huge space for China to do its vaccine diplomacy. Here, India should convince its Quad partners, particularly Australia and Japan, who oppose the waiver that vaccine production in developing countries through TRIPS waiver will enable the grouping to deliver its pledged billion doses of COVID-19 vaccine in the Indo-Pacific region. In short, the proposed waiver, if agreed, will help India in addressing the public health crisis by producing more vaccines and distributing them at home; economically, by boosting its generic pharmaceutical industry, and diplomatically, providing vaccines to the developing and least-developed countries. Therefore, India should use all available means and methods, from trade-offs to pressurising, to make the waiver happen.

Yes scale-up for covid.

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Currently many idle suppliers **can't begin vaccine production** until they upgrade and **repurpose existing manufacturing capacity** for new technology. Opponents often argue that **this step is the true barrier to rapid scale-up**. One high-profile detractor, BIO President and CEO Michelle McMurry-Heath, argues that "handing [needy countries] the blueprint to construct a kitchen that — in optimal conditions — can take a year to build will not help us stop the emergence of dangerous new Covid variants."

This argument **ignores two core truths**: In many cases, **manufacturing capacity needs only repurposing which can take mere months**. And Covid-19, at the current global response and vaccination rates, will be a threat for years.

Both truths suggest that we **pass the blueprint and build the kitchen.**

Facilitating structures to transfer technology and capacity are **already in place**. The WHO launched the **mRNA technology transfer hub model** last month to provide manufacturers in low- and middle-income countries with the **financial,**

training, and logistical support needed to scale up vaccine manufacturing capacity. Scores of manufacturers in these countries have already **expressed interest**. This initiative, however, requires recipient manufacturers to acquire **the IP necessary for mRNA technologies— which is currently missing.**

Independently strategic patenting harms innovation incentives during pandemics – encourages reproduction of generics and decrease breakthroughs.

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As the COVID-19 pandemic is sweeping through the world, thousands of people urgently need access to affordable medicines. Based on **past experience of treatments for other life-threatening diseases**, there is a fear that access to any **vaccines** and **treatment** that may be **developed** in the **future** will be **affected by patents**, leading to unaffordably high prices. However, the problem of high drug prices is not new. It had been inflating healthcare budgets and posing a serious risk to the affordability and accessibility of medicines for society well before the pandemic.Footnote3 This problem is further **exacerbated** by the fact that, despite the **alleged surge in investments** into pharmaceutical R&D, **current statistics** indicate that the **number** of new **breakthrough medicines is decreasing**.Footnote4 On the other hand, the number of drugs that contain modifications of existing medicines is growing, demonstrating that pharmaceutical companies have been increasingly focusing their research on **incremental drug development**, rather than on breakthrough innovation.Footnote5 Various reasons for high drug prices and the growing focus on incremental innovation are put forward by pharmaceutical companies, including the complexity of drug discovery and development, as well as the expensive and lengthy regulatory procedures involved.Footnote6 While these reasons play an important role in this regard, some practices by pharmaceutical companies substantially contribute to this problem.Footnote7 In particular, **pharmaceutical companies** have been increasingly **engaging in strategic patenting to delay or even block generic competition**.Footnote8 These practices attracted the attention of the European Commission, which discussed them more than a decade ago in its 2009 Pharmaceutical Sector Inquiry Report.Footnote9 The Commission identified a series of patent strategies which it described as aiming "to extend the breadth and duration of [originators'] patent protection"Footnote10 and "to delay or block the market entry of generic medicine".Footnote11 Such findings have fuelled debates as to whether these strategies may be deemed unlawful and violate EU competition rules, while also being justifiable business practices under patent law. Until today, no agreement has been reached either on the legality of these practices, or on an efficient legal tool to assess them. As a result, despite there being solid evidence that such strategies may block generic competition, allowing originators to maintain artificially high drug prices and preventing patients from accessing cheaper generics, they remain outside the ambit of the Commission's activities. Instead, the Commission has been focusing on more straightforward patent-related practices, such as reverse payment agreements. This article argues that strategic patenting by pharmaceutical companies requires a long-overdue intervention by competition authorities. It aims to attract their attention to the harmful effects of strategic patenting. Specifically, it will contest the argument traditionally put forward by originator pharmaceutical companies that the intervention of competition law into patenting practices will reduce their incentives to innovate. The paper will argue to the contrary that, along with a more immediate negative effect in the form of high drug prices that is widely explored in the literature,Footnote12 strategic patenting also affects **dynamic competition by stifling innovation**. Importantly, it will be explained that the assessment of the **effect of this practice** should **focus** not only on innovation by originators, but should also **take a wider market perspective by assessing** its effect on follow-on innovation by generic companies. The latter argument is often overlooked. The paper will outline the current approach to strategic patenting that considers this practice lawful, and will provide arguments for the intervention of competition law. This, in turn, will open the **possibility for competition authorities to investigate this practice in order to prevent its harmful effect on innovation** and **consumer welfare**. Moreover, while patent law may provide certain mechanisms to deal with strategic patenting, such as raising the bar for patentability of pharmaceutical follow-on inventions,Footnote13 these tools may not be effective in all cases. Therefore, as will be explained further, competition law may be a more suitable tool to address the negative effects of strategic patenting.Footnote14 The article will be organised as follows. It will first discuss the complex structure of the pharmaceutical industry, focusing on its key players for the purpose of this article: originators and generic companies. It will further explore patenting practices employed by pharmaceutical companies and will define the notion of strategic patenting. The article will then argue that the latter strategy is against the rationale of patent and competition laws, as it stifles competition by impairing incentives to innovate of both originators and generic companies. Finally, it will discuss the current approach to strategic patenting that considers this practice lawful, and will argue that it should be subject to scrutiny under the rules of competition law, to address its negative effects. Pharmaceutical Innovation and Generic Competition in the Pharmaceutical Industry The pharmaceutical industry is unique in its complexity. It is characterised by heavy state regulation and, sometimes, by the competing interests of the pharmaceutical business and society. It also involves multiple actors, including originators,Footnote15 marketing authorisation bodies, generic companies,Footnote16 doctors, pharmacies and patients. Each of them plays their part in the lengthy and complicated process of transforming a chemical compound into an effective and affordable medicine, which is then prescribed, dispensed and consumed. In these complex relationships, the two key players have crucial roles. On the one hand, originators play an important role in developing new and improved medicines for the benefit of society. On the other hand, generic companies benefit society by supplying cheaper equivalents of the originators' medicines, which leads to the reduction of drug prices and facilitates access to affordable medicines. When the interests of these two players are kept in balance, benefits are maximised for society, which receives innovative and improved medicines, as well as timely access to generic drugs. However, if the balance swings towards one of the players, then society loses out, as there will be insufficient access to either innovative or affordable medicines. Therefore, both pharmaceutical innovation and generic competition must be duly incentivised and protected. Moreover, these two elements of the pharmaceutical industry are constantly interacting and have a profound impact on each other. In particular, pharmaceutical innovation is the backbone of the pharmaceutical industry, in which originators play an important role. The process of drug development is long and complicated, requires significant investments, and bears considerable commercial risks.Footnote17 It is also highly regulated, including, among other things, the requirement for originators to obtain a special authorisation from a designated state authority to market a drug. Such marketing authorisations are granted to the originators only if they can prove that the drug is safe and effective, which typically requires lengthy and expensive clinical trials.Footnote18 In order to protect these significant efforts and investments, pharmaceutical companies rely heavily on the exclusivity granted by intellectual property rights, and in particular, patents.Footnote19 Patents provide a 20-year monopoly right, during which a pharmaceutical company enjoys market exclusivity and can charge a monopoly price for its products. Originators argue that strong patent protection is essential in order to recoup investments, as well as to incentivise them to engage in further innovation.Footnote20 Once such patent protection expires, however, other companies may develop generics of a branded drug, and start competing with the originator for the market. This is called generic competition. Generic drugs are bioequivalent versions of a branded drug that has lost its patent protection.Footnote21 It is estimated that the generic entry typically leads to, on average, an 80 per cent market share loss and a 20–30 per cent reduction of a drug price, with further price decreases with each additional generic entrant, leading, in some instances, to a fall in price of up to 90 per cent.Footnote22 A representative example of the effect of generic competition on the originators' drug prices is the significant decrease in price and dramatic loss of profits by Eli Lilly. The expiration of a patent protecting its blockbusterFootnote23 antidepressant Prozac in 2001 resulted in a loss of almost 70 per cent of its market and $2.4 billion in annual U.S. sales.Footnote24 This effect of generic competition is beneficial for society, as it reduces the financial pressure on healthcare budgets and increases the accessibility of drugs. Patenting Practices by Pharmaceutical Companies As was mentioned above, generic competition is prevented during the life of a patent protecting an active compound of a drug (a so-called "basic" or "primary" patent).Footnote25 Such a basic patent covers an active ingredient itself and, therefore, provides the strongest protection for the product. Therefore, generic competition normally starts only after the basic patent expires, or if a generic company succeeds in invalidating it. While in the past pharmaceutical companies **mainly protected their products** with a single patent covering an active compound,Footnote26 they now increasingly seek **additional patent protection** on various aspects of a drugFootnote27 in order to protect their market position.Footnote28 Such additional patents are often called secondary patents.Footnote29 A pharmaceutical company may want to obtain secondary patents, which protect such aspects of a drug as, for example, its process of manufacture, formulation and/or specific form, etc. Therefore, even after the basic patent protecting an active compound expires, a **drug may still be protected by other secondary patents.** This may **result in the extension of the scope and length of the protection of a product**, especially if secondary **patents have a later expiration date** than a basic patent.Footnote30 This, in particular, may occur if, for example, the process of producing an active compound disclosed in the basic patent is sufficient only for reproducing this compound in a laboratory, but it is unsuitable for producing it on a large commercial scale.Footnote31 If the originator was able to secure a secondary patent that protects such a large scale manufacturing process, it would **prevent generics**

from using this process for producing their generic versions of a drug; otherwise they would **risk infringing this secondary patent**.[32] However, a unique feature of pharmaceuticals is that an active ingredient can be manufactured using **different methods and processes**, can exist in different forms or can be used in different formulations. Therefore, when a basic patent on an active ingredient expires, other companies can develop alternative methods of production, forms or formulations of this active compound and start competing with the originator company.[33] While such patenting strategies by originators are lawful in principle, some of them may be problematic. In particular, in anticipation of the loss of patent protection, originators may engage in strategic patenting which **artificially prevents generic competition and results in an extension of their market monopoly**.[34] Defining Strategic Patenting In its Sector Inquiry Report, the European Commission explained that the drug development process consists of three main stages: (i) the R&D stage, which ends with the launch of a drug on the market; (ii) the period between the launch and the patent expiry; and (iii) the period after the patent expiration, when generics can enter the market.[35] During the second stage, i.e. after the launch of a drug, originators seek to maximise their income from the product in order to recoup their R&D investments and earn profits before the commencement of generic competition.[36] It is also during this stage that pharmaceutical companies seek to prolong their market exclusivity. In recent years, pharmaceutical companies have been increasingly relying on the **strategic use of the patent system to combat the pressure of generic competition**. Such practices are often called "life cycle management" by originators and proponents of the practice. For example, as Burdon and Sloper explained, "[a] key element of any life cycle management strategy … is to extend patent protection beyond the basic patent term for as long as possible, by filing secondary patents which are effective to keep generics off the market".[37] However, critics have characterised the practice as "**evergreening**",[38] as it essentially evergreens the patent protection and the exclusivity of a product.[39] For instance, Bansal et al. explain that evergreening "refers to different ways wherein patent owners take undue advantage of the law and associated regulatory processes to **extend their IP monopoly**, particularly over highly lucrative 'blockbuster' drugs, by filing disguised/artful patents on an already patent-protected invention shortly before expiry of the 'parent' patent".[40] During its investigation into the pharmaceutical industry, the European Commission found that the number of patents granted and pending applications significantly increases with the value of a drug, i.e. "blockbuster medicines can even be protected by up to nearly 100 INN-specific EPO **patented bundles and applications** …, which in one particular case led to 1,300 patents and applications across all the EU Member States".[41][42] The Commission also found that the ratio of primary to secondary patents is 1:7, where the latter "mostly concern formulations, processes and non-formulation products…, such as salts, polymorphic forms, particles, solvates and hydrates".[43] As a result, the Commission concluded that the practice of "maximising patent coverage in such a way is the creation of a web of patents", which affects the generics' ability to "develop a generic version of the medicine in form of a salt, crystalline or amorphous form", because it "would inevitably infringe a patent (for example, a patent for the relevant salt, crystalline or amorphous form of the medicine)".[44] Each of such patents would typically have a later expiration date, which effectively extends a period of market exclusivity beyond the expiration of a basic patent.[45] In addition, most of these patents that protect such follow-on modifications are so-called "sleeping" patents, i.e. patents which a company has no intention of commercialising.[46] Moreover, such modifications may **provide little or no therapeutic benefits to the patient compared to the original drug**.[47] Nevertheless, such patents allow originators to secure the most efficient, broadest and longest possible protection for their successful products.[48] The denser the web of secondary patents, the more **difficult it is for generics to develop their generic equivalents**, even if they know that only a few patents of a large portfolio would, in fact, be valid and infringed by their products.[49] Despite such knowledge, it is impossible to be certain before introducing a generic whether this will be the case and, thus, whether the generic company will be subject to injunctions preventing the sale of their generic products.[50] Such practice, therefore, provides an appreciable competitive advantage for originators by creating a significant legal and commercial uncertainty for generics in relation to the possibility of their market entry.[51] This paper argues that such a strategic use of the patent system by pharmaceutical companies is against the shared goal of patent and competition laws of facilitating innovation for the benefit of society. As will be explained further, in addition to a more immediate negative effect in the form of high drug prices, strategic patenting may also impair innovation by reducing originators' incentives to innovate, and affecting generics' ability to develop alternative generic products. Strategic patenting, therefore, may enable originators to avoid competitive pressures by preventing generic competition without a need to engage in genuine innovation. Strategic Patenting **Contradicts the Rationale of the Patent System** and Competition Law In the competitive markets, the success of a company is based on its business performance.[52] In order to compete on performance by "offering better quality and a wider choice of new and improved goods and services",[53] firms must innovate. Realising the importance of protecting innovation, which is considered to be the main driver of economic growth,[54] states have put in place various mechanisms to ensure a suitable environment for its advancement. These include granting the property rights to the results of innovation in the form of patents, as well as implementing competition law rules to stimulate dynamic competition.[55] Specifically, one of the main justifications for the patent system is the encouragement of innovation[56] that serves as an engine for economic growth and development.[57] The patent system pursues this aim by offering the patent owners a period of exclusive rights as a reward for their innovative efforts and an incentive to engage in further innovation.[58] Therefore, intellectual property rules, and patents in particular, are seen as an **essential element of undistorted competition on the internal market**.[59] These exclusive rights are considered to be a necessary incentive to invest in R&D and innovation, particularly in such sectors as pharmaceuticals, where the R&D costs are high, but the costs of copying the R&D results are marginal.[60] At the same time, the "innovation theory", embodied in the EU competition law rules and policy, is designed to stimulate innovation by fostering competition on the markets.[61] The competition law rules keep markets innovative by maintaining effective competition through preventing the foreclosure of markets and maintaining access to them.[62] The rationale is that firms react to pressures of competition by continuously seeking to innovate.[63] Therefore, patent and competition laws complement each other, as on the one hand, existing competition creates pressures on firms, forcing them to innovate, the so-called "stick", while on the other hand, patent law provides a "carrot" in the form of the exclusive right, thus inducing innovators to innovate.[64] These two bodies of laws are seen as "complementary efforts to promote an efficient marketplace and long-run, dynamic competition through innovation".[65] As the European Commission noted "both intellectual property rights and competition are necessary to promote innovation and ensure a competitive exploitation thereof".[66] These two bodies of laws, therefore, have the same fundamental goal of enhancing innovation for the benefit of consumer welfare. Importantly, patent and competition laws are designed to stimulate not only innovation of "pioneer" innovators, but they are also aimed at facilitating follow-on innovation.[67] Patent law contains provisions that require inventors to disclose information about their inventions, as well as providing exceptions such as experimental use and compulsory licensing, which allow third parties to access the inventions still under patent protection.[68] Therefore, along with pioneer innovators, the rationale of incentives to innovate in patent law also applies to follow-on innovators, balancing the interests of these two types of inventors.[69] Similarly, competition law aims at stimulating all types of innovation, including follow-on innovation. On the other hand, EU competition law proscribes practices that reduce **incentives to innovate both for "pioneer" and follow-on innovators**. This is enshrined in Art. 102(b) TFEU, which prohibits abuses that consist of, inter alia, limiting technological development. For example, in AstraZeneca the General Court considered that the company's practice of misusing the patent system had the potential of reducing its incentives to innovate and was anticompetitive.[70] In Magill[71] and Microsoft,[72] the courts found that the IP rights owners **abused their dominant positions by blocking innovation of their potential competitors**. More recently, several decisions by the European Commission also emphasised the importance of protecting innovation. In January 2018, the Commission fined Qualcomm[73] €997 million for abusing its market dominance in LTE baseband chipsets.[74] The Commission considered that the exclusivity payments that Qualcomm paid to Apple denied rivals the possibility to compete on the merits, and deprived European consumers of genuine choice and innovation.[75] Furthermore, in July 2018, the Commission found in Google Android that Google abused its dominant position, and fined the company €4.34 billion for anticompetitive restrictions it had imposed on mobile device manufacturers and network operators to strengthen its dominant position in general internet search.[76] The Commission considered that Google's restrictive practices denied other companies the chance to compete on the merits and innovate.[77] Finally, in 2017 the Commission issued its decision, in which it took the view that Amazon abused its dominant positions on the markets for the retail distribution of e-books by inserting the so-called "parity clauses" in the agreements with its e-book suppliers.[78] It concluded that these clauses had the potential of reducing the incentives to innovate both by e-book suppliers and retailers.[79] These decisions demonstrate that the European Commission recognises the fundamental importance of protecting innovation. They confirm that strategies that are capable of stifling innovation and reducing the incentives to innovate may constitute an abuse of dominance under Art. 102 TFEU. It is argued in this article that, along with the practices condemned by the Commission in the decisions discussed above, strategic patenting can also harm innovation by impairing incentives to innovate of both originators and generic companies, and therefore should raise competition law concerns. Strategic Patenting **Impairs Originators' Incentives to Innovate** While originator companies typically argue that the competition law intervention into their

patenting practices will reduce their incentives to innovate,Footnote81 this article asserts that strategic patenting itself reduces originators' incentives. Thus, in a properly functioning system, when a **patent protecting a product is close to expiration the originator** would be **encouraged to innovate** further in order to introduce a new product on the market and maintain its competitive position. However, by engaging in strategic patenting, the originator's incentive to innovate diminishes as it **enjoys its monopoly position by merely procuring numerous secondary patents** that shield its current product from generic competition. Therefore, when companies engage in such strategic patenting, they are merely protecting themselves from the **competitive pressures** that competition law aims to establish. Maintaining that this practice is lawful, originators argue that strong patent protection is essential for recouping their investments, as well as for incentivising them to engage in further innovation.Footnote82 Such a position may find some support in the arguments put forward by Joseph Schumpeter and his followers, who claimed that since monopoly increases the reward of the innovator, monopolists are more prone to innovation.Footnote83 However, as Lowe noted:Footnote84 the empirical evidence of the past few decades has worked against Schumpeter and in favor of Kenneth Arrow, who contends that in favoring monopolies Schumpeter underestimated the incentives for innovation that competition can offer. Monopolists tend to want to keep their monopolies by **resorting to any measures that can keep new entrants** out. Firms **under competitive pressure from actual or potential competition**, on the other hand, are **less complacent** and know that inventing a new product is their best strategy for maintaining and increasing their market share. In the same vein, the Commission emphasises the importance of competition for the incentives to innovate, stating that: "[r]ivalry between undertakings is an essential driver of economic efficiency, including dynamic efficiencies in the form of innovation. In its absence the dominant undertaking will lack adequate incentives to continue to create and pass on efficiency gains."Footnote85 Evidence from the pharmaceutical industry confirms that strategic patenting reduces incentives to engage in genuine and meritorious innovation. In many cases, strategically accumulated secondary patents are of marginal quality and are typically the result of routine research activities.Footnote86 For example, in Perindopril the European Commission revealed that most of the secondary patents, procured as part of the originator company's anti-generic strategy, were seen by the company as "blocking" or "paper", some of which it considered involved "**zero inventive step**".Footnote87 and a purely editorial task.Footnote88 Moreover, these follow-on pharmaceutical inventions are specifically timed around the expiration of the basic patent and can be developed on demand.Footnote89 In AstraZeneca the Commission noted that the company designed to "[f]ile a patent-cloud of mixtures, uses, formulations, new indications, and chemistry" in relation to its blockbuster product omeprazole to slow down generic entry at a specifically defined time, close to the expiration of the basic patent.Footnote90 The main aim of these patents is to increase uncertainty for generic companies as to the possibility of their market entry.Footnote91 Therefore, while many of these secondary patents may be trivial and potentially invalid, the originator pursues them to protect its current successful product from generic competition.Footnote92 Even if a company continues to engage in innovation in parallel to pursuing strategic patenting, it still protects itself from the **pressures of competition**, which would have forced the company to innovate faster and would thus provide consumers with better products and/or access to **cheaper generic versions earlier**. As Ullrich argues:Footnote93 A slowdown in the transition of the new medicines from the protected status of a proprietary medicine to the status of generic products manufactured and distributed in open competition does not simply mean a loss of static efficiency, namely a loss of consumer well-being due to a slowdown in the reduction of process. Rather, such a slowdown also involves the risk of a loss of dynamic efficiency in that it extends the duration of a monopoly rent situation, thus reducing the pressure to innovate more quickly. Following the rationale of the General Court's statement in AstraZeneca, the practice of the originator that extends its market monopoly by relying on the patent system "potentially reduces the incentive to engage in innovation, since it enables the company in a dominant position to maintain its exclusivity beyond the period envisaged by the legislator".Footnote94 Such practices, according to the Court, act "contrary to the public interest".Footnote95 Therefore, the practice of strategic patenting that protects originators' monopolies from competitive pressures and significantly reduces their incentives to engage in genuine innovation is contrary to the rationale of the patent system, has a significant negative effect on competition and should raise competition law concerns. **Strategic Patenting** Impairs **Follow-on Innovation of Generic Companies** Strategic patenting also has a **chilling effect on follow-on innovation** by generic competitors in the form of **developing alternative versions of an off-patent compound**. As was discussed earlier, the expiry of a basic patent that protects an active compound facilitates generic competition. This is because even if the product is still protected by process, specific form or formulation patents, generic companies may develop alternative ways of producing or formulating the product and start competing with the originator In the absence of **strategically accumulated patents by the originator**, generic companies are typically open to innovating to launch alternative generic products as soon as the basic patent expires. However, by pursuing strategic patenting, originators may **discourage generics from engaging in follow-on innovation because of the uncertainty about the patent protection and a fear of infringing on one of the numerous patents**.Footnote96 In its Sector Inquiry Report, the Commission cited the following quote from one of the originators: The entire point of the patenting strategy adopted by many originators is to remove legal certainty. The strategy is to file as many patents as possible on all areas of the drug and create a "minefield" for the generics to navigate. All generics know that very few patents in that larger group will be valid and infringed by the product they propose to make, but it is impossible to be certain prior to launch that your product will not infringe and you will not be the subject of an interim injunction.Footnote97 Therefore, as a result of creating an impenetrable ring of patent protection by the originator,Footnote98 generic competitors may be prevented from developing alternative generic versions of an off-patent compound. One of the examples revealed by the Commission during its Pharmaceutical Sector Inquiry was the filing by an originator company of "more than 30 patent families translating into several hundreds of patents in the Member States in relation to one product", many of which were filed after the introduction of the product.Footnote99 This affected the intentions of several generic companies that planned to develop and bring their generic versions of the original product to the market.Footnote100 As a result, in addition to the already high barriers to entry into the pharmaceutical market due to patents that protect an existing product and the need to obtain a marketing authorisation, strategic patenting raises these entry barriers further, making it very difficult for generic companies to overcome them. This strategy, therefore, "may without further enforcement action by originator companies, … delay generic entry until the patent situation is clearer or even discourage more risk-sensitive generic companies from entering altogether".Footnote101 Consequently, the fact that actual or potential competitors of originators would not be able to develop alternative generic products means that no one could enter the market and challenge originators' monopoly positions. This results in a weakening of competition in the relevant market and a strengthening of the originator's already dominant position. As Maggiolino put it, "patent accumulation … may work as a pre-emptive entry-deterrence strategy to protect monopoly power and … lower consumer welfare by allowing dominant firms to keep on charging over-competitive prices".Footnote102 Therefore, when an array of accumulated secondary patents "blocks monopolists' rivals from producing follow-on innovations, this strategy prevents the whole society from enjoying … these further innovations".Footnote103 While practices that facilitate innovation are encouraged by competition law, practices that are aimed at blocking follow-on innovation by competitors should raise competition law concerns.

Corona escalates security threats that cause extinction – cooperation thesis is wrong.

Recna 21 [Research Center for Nuclear Weapon Abolition; Nagasaki, Japan; "Pandemic Futures and Nuclear Weapon Risks: The Nagasaki 75th Anniversary pandemic-nuclear nexus scenarios final report," Journal for Peace and Nuclear Disarmament; 5/28/21; https://www.tandfonline.com/doi/full/10.1080/25751654.2021.1890867] Justin

The Challenge: **Multiple Existential Threats**

The relationship between pandemics and war is as long as human history. Past pandemics have **set the scene for wars** by **weakening societies**, undermining **resilience**, and **exacerbating civil and inter-state conflict**. Other disease outbreaks have erupted during wars, in part due to the appalling public health and battlefield conditions resulting from war, in turn sowing the seeds for new conflicts. In the post-Cold War era, pandemics have spread with unprecedented speed due to increased mobility created by globalization,

especially between urbanized areas. Although there are positive signs that scientific advances and rapid innovation can help us manage pandemics, it is likely that deadly infectious viruses will be a challenge for years to come.

The COVID-19 is the most **demonic pandemic threat in modern history**. It has erupted at a juncture of other existential global threats, most importantly, accelerating climate change and resurgent nuclear threat-making. The most important issue, therefore, is how the coronavirus (and future pandemics) will **increase or decrease the risks associated with these twin threats, climate change effects, and the next use of nuclear weapons in war.5**

Today, the nine **nuclear weapons arsenals** not only can **annihilate hundreds of cities**, but also cause **nuclear winter and mass starvation** of a billion or more people, if not the **entire human species**. Concurrently, climate change is **enveloping the planet with more frequent** and **intense storms**, accelerating **sea level rise**, and advancing **rapid ecological change**, expressed in **unprecedented forest fires** across the world. Already **stretched** to a breaking point in many countries, the current pandemic may overcome resilience to the point of near or **actual collapse of social, economic, and political order.**

In this extraordinary moment, it is timely to **reflect** on the existence and **possible uses of weapons of mass destruction under pandemic conditions** – most importantly, **nuclear weapons**, but also **chemical** and **biological** weapons. Moments of **extreme crisis and vulnerability** can prompt **aggressive** and counterintuitive **actions** that in turn may destabilize already precariously balanced threat systems, underpinned by conventional and nuclear weapons, as well as the threat of weaponized **chemical and biological technologies**. Consequently, the **risk of the use of weapons of mass destruction** (WMD), especially nuclear weapons, **increases** at such times, possibly sharply.

The COVID-19 pandemic is **clearly driving massive, rapid, and unpredictable changes** that will **redefine every aspect of the human condition**, including **WMD** – just as the world wars of the first half of the 20th century led to a revolution in international affairs and entirely new ways of organizing societies, economies, and international relations, in part based on nuclear weapons and their threatened use. In a world **reshaped by pandemics**, **nuclear weapons** – as well as correlated **non-nuclear WMD**, **nuclear alliances**, **"deterrence" doctrines**, operational and **declaratory policies**, nuclear **extended deterrence**, organizational practices, and the **existential risks** posed by retaining these capabilities – are all up for redefinition.

A pandemic has potential to **destabilize a nuclear-prone conflict by incapacitating** the supreme nuclear commander or **commanders** who have to **issue nuclear strike orders**, creating uncertainty as to who is in charge, how to handle nuclear mistakes (such as errors, accidents, technological failures, and entanglement with conventional operations gone awry), and opening a brief opportunity for a first strike at a time when the COVID-infected state may not be able to retaliate efficiently – or at all – due to leadership confusion. In some nuclear-laden conflicts, a state might use a pandemic as a cover for political or military provocations in the belief that the adversary is distracted and partly disabled by the pandemic, increasing the risk of war in a nuclear-prone conflict. At the same time, a pandemic may lead nuclear armed states to increase the isolation and sanctions against a nuclear adversary, making it even harder to stop the spread of the disease, in turn creating a pandemic reservoir and transmission risk back to the nuclear armed state or its allies.

In principle, the common threat of the pandemic might induce nuclear-armed states to reduce the tension in a nuclear-prone conflict and thereby the risk of nuclear war. It may cause nuclear adversaries or their umbrella states to seek to resolve conflicts in a cooperative and collaborative manner by creating habits of communication, engagement, and mutual learning that come into play in the nuclear-military sphere. For example, militaries may cooperate to control pandemic transmission, including by working together against criminal-terrorist non-state actors that are trafficking people or by joining forces to ensure that a new pathogen is not developed as a bioweapon.

To date, however, the COVID-19 pandemic has increased the isolation of some nuclear-armed states and provided a textbook case of the **failure of states to cooperate to overcome the pandemic**. Borders have slammed shut, trade shut down, and budgets blown out, creating enormous pressure to focus on immediate domestic priorities. Foreign policies have become markedly more nationalistic. Dependence on **nuclear weapons may increase as states seek to buttress a global re-spatialization6** of all dimensions of human interaction at all levels to manage pandemics. The effect of nuclear threats on leaders may make it less likely – or even impossible – to achieve the kind of concert at a global level needed to respond to and administer an effective vaccine, making it harder and even impossible to revert to pre-pandemic international relations. The result is that some states may **proliferate** their own nuclear weapons, further

reinforcing the spiral of conflicts contained by nuclear threat, with **cascading effects on the risk of nuclear war.**

1AC – Plan

Plan text: The member nations of the World Trade Organization ought to reduce intellectual property protections for medicines during pandemics.

Enforcement through limited IP waivers solve – patent term extensions are normal means and solves innovation and scale-up.

Young and Potts-Szeliga 21 [Roberta; Counsel in Seyfarth's Litigation department and Intellectual Property and Patent Litigation practice groups in Los Angeles; Jamaica Potts-Szeliga; Partner in Seyfarth's Litigation department and Intellectual Property and Patent Litigation practice groups in Washington, DC. She also provides advice on FDA regulatory issues and is part of the firm's Health Care, Life Sciences, and Pharmaceuticals team; "A Third Option: Limited IP Waiver Could Solve Our Pandemic Vaccine Problems," IP Watch Dog; 7/21/21; https://www.ipwatchdog.com/2021/07/21/third-option-limited-ip-waiver-solve-pandemic-vaccine-problems/id=135732/] Justin

Limited Waiver Approach

This article suggests a third option, between voluntary vaccine donation and the full IP waiver proposal, that may offer a way forward. The third proposed solution is incentivized **limited IP waivers that could encourage** (or require) private companies to engage in **licensing agreements with nations to share some, but not all, of the knowledge and designs covering the COVID-19 vaccines** to the developing world. The limited IP waivers could cover the minimum necessary portions of the technology to produce **basic** COVID-19 **vaccines**. The waivers could be limited in time to the **duration of the pandemic**, or another term agreed to by the WTO. The term could also be defined as ending when widespread vaccination and immunity goals are achieved. The incentive for pharmaceutical companies to support such limited IP waivers could be provided in the **form of patent term extensions for the technology covered by the limited IP waivers.**

Extensions of patent term are already known and widely used. In the U.S., patent term adjustments are **automatically added on to the patent lifespan** to account for any delays by the USPTO in the patent prosecution process. In some cases, these mechanisms may extend the patent term for years. Patent term extensions also are available for regulatory delays (35 U.S.C. § 156). In particular, patents covering, **inter alia, drug products approved by the United States Food & Drug Administration may be eligible for up to five years** of additional patent term to give back time required to complete the regulatory review process. Both patent term adjustments and patent term extensions arise from activities beyond the control of the pharmaceutical companies. A pandemic patent term extension fashioned after such known extensions could be made **used to compensate** for the current pressing global health needs.

This third proposal **may be achievable at the WTO**. Hurdles remain and it could be months or years before the WTO reaches an agreement on any waiver of IP protections, and years before countries build factories, gather materials, and gain the expertise to produce the vaccines. A **steep hurdle** is that **mRNA is a new technology**, with **no machines or experts** for hire. Nonetheless, **the third solution offers hope** to find a middle ground that may begin to be implemented before the end of the current pandemic and be in place for the future.

The patent term extension could be provided for countries with patent offices and could be adapted based on laws and conditions in each country. Pandemic-related patent term extensions could be given for a period of time that the compulsory license is in force. With **current pandemic projections of six months to two years** for sufficient distribution, providing a **patent term extension is reasonable** and **in line** with the time period of many patent term extensions. Given that most pharmaceutical patents are prosecuted in multiple countries, this provides an incentive to participate in a limited waiver program.

Let's Not Repeat Past Mistakes

It's been a century since the last pandemic devastated the globe and the only certainty is that this will not be the last pandemic. Solutions created today lay a **foundation for mitigation of the next pandemic**. It's been said that those who refuse to learn from history are doomed to repeat it, a thought too painful to contemplate with a pandemic. The **industrial nations** of the world have technology that others are literally **dying** to obtain—a high price to pay. Incentivized limited IP waivers may offer a compromise to **bridge the gap between maintaining IP rights** (and thus relying on charity alone) and arbitrary compulsory licensing that could deter the technological investment to create life-saving solutions in the future.

The plan is critical to boosting WTO legitimacy.

Navnit 21 [Brajendra; Ambassador and Permanent Representative of India to WTO; "Science has delivered, will the WTO deliver?" Helsinki Times; 1/18/21; https://www.helsinkitimes.fi/columns/columns/viewpoint/18561-science-has-delivered-will-the-wto-deliver.html] Justin

TRIPS waiver proposal from India, South Africa and other members

A proposal by India, South Africa and eight other countries calls on the World Trade Organisation (WTO) to **exempt member countries from enforcing some patents**, and **other Intellectual Property** (IP) rights under the **organization's Agreement on Trade-Related Aspects of Intellectual Property Rights**, known as TRIPS, for a limited period of time.

It is to ensure that IPRs **do not restrict the rapid scaling- up of manufacturing** of COVID-19 vaccines and treatments. While a few members have raised concerns about the proposal, a large proportion of the WTO membership supports the proposal. It has also received the backing of various international organizations, multilateral agencies and global civil society.

Unprecedented times call for unorthodox measures. We saw this in the efficacy of strict lockdowns for a limited period, as a policy intervention, in curtailing the spread of the pandemic.International Monetary Fund (IMF) in its October 2020 edition of World Economic Outlook states "…However, the risk of worse growth outcomes than projected remains sizable. If the virus resurges, progress on treatments and vaccines is slower than anticipated, or countries' access to them remains unequal, economic activity could be lower than expected, with renewed social distancing and tighter lockdowns". The situation appears to be grimmer than predicted, we have already lost 7% of economic output from the baseline scenario projected in 2019. It translates to a loss of more than USD 6 trillion of global GDP. Even a 1% improvement in global GDP from the baseline scenario will add more than USD 800 billion in global output, offsetting the loss certainly of a much lower order to a sector of economy on account of the Waiver.

"While making the **vaccines available was a test of science**, making them **accessible and affordable is going to be a test of humanity**"

Merely a signal to ensure timely and affordable access to vaccines and treatments will work as a **big confidence booster for demand revival** in the economy. With the emergence of successful vaccines, there appears to be some hope on the horizon. But how will these be made accessible and affordable to global population? The fundamental question is whether there will be enough of Covid-19 vaccines to go around. As things stand, even the most optimistic scenarios today cannot assure access to Covid-19 vaccines and therapeutics for the majority of the population, in rich as well as poor countries, by the end of 2021. All the members of the WTO have agreed on one account that there is an urgent need to scale-up the manufacturing capacity for vaccines and therapeutics to meet the massive global needs. The TRIPS Waiver Proposal **seeks to fulfil this need by ensuring** that IP **barriers do not come in the way of such scaling up of manufacturing capacity.**

Why existing flexibilities under the TRIPS Agreement are not enough

The existing flexibilities under the TRIPS Agreement are not adequate as these were not designed keeping pandemics in mind. Compulsory licenses are issued on a country by country, case by case and product by product basis, where every jurisdiction with an IP regime would have to issue separate compulsory licenses, practically making collaboration among countries extremely onerous. While we encourage the use of TRIPS flexibilities, the same are time-consuming and cumbersome to implement. Hence, only their use cannot ensure the timely access of affordable vaccines and treatments. Similarly, we have not seen a very encouraging progress on WHO's Covid19-Technology Access Pool or the C-TAP initiative, which encourages voluntary contribution of IP, technology and data to support the global sharing and scale-up of the manufacturing of COVID- 19 medical products. Voluntary Licenses, even where they exist, are shrouded in secrecy. Their terms and conditions are not transparent. Their scope is limited to specific amounts or for a limited subset of countries, thereby encouraging nationalism rather than true international collaboration.

Why is there a need to go beyond existing global cooperation initiatives?

Global cooperation initiatives such as the COVAX Mechanism and the ACT-Accelerator are inadequate to meet the massive global needs of 7.8 billion people. The ACT-A initiative aims to procure 2 billion doses of vaccines by the end of next year and distribute them fairly around the world. With a two-dose regime, however, this will only cover 1 billion people. That means that even if ACT-A is fully financed and successful, which is not the case presently, there would not be enough vaccines for the majority of the global population.

Past experience

During the initial few months of the current pandemic, we have seen that shelves were emptied by those who had access to masks, PPEs, sanitizers, gloves and other essential Covid-19 items even without their immediate need. The same should not happen to vaccines. Eventually, the world was able to ramp up manufacturing of Covid-19 essentials as there were no IP barriers hindering that. At present, we need the **same pooling of IP rights and know-how** for **scaling up the manufacturing of vaccines** and **treatments**, which unfortunately has not been **forthcoming**, necessitating the need for the Waiver.

It is the pandemic – an extraordinary, once in a lifetime event – that has mobilized the collaboration of multiple stakeholders. It is knowledge and skills held by scientists, researchers, public health experts and universities that have enabled the cross-country collaborations and enormous public funding that has facilitated the development of vaccines in record time – and not alone IP!

Way forward

The TRIPS waiver proposal is a targeted and proportionate response to the exceptional public health emergency that the world faces today. Such a Waiver is well-within the **provisions of Article IX of the Marrakesh Agreement which established the WTO**. It can help in ensuring that human lives are not lost for want of a timely and affordable access to vaccines. The **adoption** of the Waiver will also **re-establish WTO's credibility and show that multilateral trading system continues to be relevant and can deliver in times of a crisis**. Now is the time for WTO members to act and **adopt the Waiver** to save lives and help in getting the economy back on the revival path quickly.

While making the vaccines available was a test of science, making them accessible and affordable is going to be a test of humanity. History should remember us for the "AAA rating" i.e. for Availability, Accessibility and Affordability of Covid19 vaccines and treatments and not for a single "A rating" for Availability only. Our future generations deserve nothing less.

WTO cred solves wars that go nuclear.

Hamann 09 [Georgia; 2009; J.D. Candidate, Vanderbilt University Law School; "Replacing Slingshots with Swords: Implications of the Antigua-Gambling 22.6 Panel Report for Developing Countries and the World Trading System," VANDERBILT JOURNAL OF TRANSNATIONAL LAW, http://www.jogoremoto.pt/docs/extra/duqJ53.pdf] Justin

Both Antigua and the U.S. claimed the resolution of the arbitration as a victory.99 In reality, the decision reached a midpoint between the respective countries' positions, establishing a victory for the evolution of the international trading system itself. **Voluntary compliance** with **WTO rules and procedures** is of the **utmost importance to the international trading system**.100 Given the **increasingly globalized market**, the **coming years** will see **an increase in the importance** of the **WTO as a cohesive force** and **arbiter of disputes** that likely will become more **frequent and injurious**.101 The **work of the WTO** cannot be **overstated** in a **nuclear-armed world**, as the body continues to **promote respect** and even **amity** among **nations** with opposing **philosophical goals or modes of governance**.102 Demagogues in the Unites States may **decry the rise of China as a geopolitical threat**,103 and extremists in **Russia may play dangerous games of brinksmanship** with other great powers, but **trade keeps politicians' fingers off "the button."**104 The WTO offers an **astounding rate of compliance** for an organization with no standing army and no real power to enforce its decisions, suggesting that governments recognize the **value of maintaining the international construct of the WTO**.105 In order to promote voluntary compliance, the WTO must **maintain a high level of credibility**.106 Nations must **perceive the WTO as the most reasonable option for dispute resolution** or **fear** that the WTO wields enough influence to enforce sanctions.107 The arbitrators charged with performing the substantive work of the WTO by negotiating, compromising, and issuing judgments are keenly aware of the responsibility they have to uphold the organization's credibility.108

1AC – FW

The standard is maximizing expected well-being, or hedonistic act utilitarianism.

1] Neuroscience- pleasure and pain *are* intrinsic value and disvalue – everything else regresses.

Blum et al. 18 [Kenneth Blum, 1Department of Psychiatry, Boonshoft School of Medicine, Dayton VA Medical Center, Wright State University, Dayton, OH, USA 2Department of Psychiatry, McKnight Brain Institute, University of Florida College of Medicine, Gainesville, FL, USA 3Department of Psychiatry and Behavioral Sciences, Keck Medicine University of Southern California, Los Angeles, CA, USA 4Division of Applied Clinical Research & Education, Dominion Diagnostics, LLC, North Kingstown, RI, USA 5Department of Precision Medicine, Geneus Health LLC, San Antonio, TX, USA 6Department of Addiction Research & Therapy, Nupathways Inc., Innsbrook, MO, USA 7Department of Clinical Neurology, Path Foundation, New York, NY, USA 8Division of Neuroscience-Based Addiction Therapy, The Shores Treatment & Recovery Center, Port Saint Lucie, FL, USA 9Institute of Psychology, Eötvös Loránd University, Budapest, Hungary 10Division of Addiction Research, Dominion Diagnostics, LLC. North Kingston, RI, USA 11Victory Nutrition International, Lederach, PA., USA 12National Human Genome Center at Howard University, Washington, DC., USA, Marjorie Gondré-Lewis, 12National Human Genome Center at Howard University, Washington, DC., USA 13Departments of Anatomy and Psychiatry, Howard University College of Medicine, Washington, DC US, Bruce Steinberg, 4Division of Applied Clinical Research & Education, Dominion Diagnostics, LLC, North Kingstown, RI, USA, Igor Elman, 15Department Psychiatry, Cooper University School of Medicine, Camden, NJ, USA, David Baron, 3Department of Psychiatry and Behavioral Sciences, Keck Medicine University of Southern California, Los Angeles, CA, USA, Edward J Modestino, 14Department of Psychology, Curry College, Milton, MA, USA, Rajendra D Badgaiyan, 15Department Psychiatry, Cooper University School of Medicine, Camden, NJ, USA, Mark S Gold 16Department of Psychiatry, Washington University, St. Louis, MO, USA, "Our evolved unique pleasure circuit makes humans different from apes: Reconsideration of data derived from animal studies", U.S. Department of Veterans Affairs, 28 February 2018, accessed: 19 August 2020, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6446569/] R.S.

Pleasure is not only one of the three primary reward functions but it also **defines reward.** As homeostasis explains the functions of only a limited number of rewards, the principal reason why particular stimuli, objects, events, situations, and activities are rewarding may be due to pleasure. This applies first of all to sex and to the primary homeostatic rewards of food and liquid and extends to money, taste, beauty, social encounters and nonmaterial, internally set, and intrinsic rewards. Pleasure, as the primary effect of rewards, drives the prime reward functions of learning, approach behavior, and decision making and provides the **basis for hedonic theories** of reward function. We are attracted by most rewards and exert intense efforts to obtain them, just because they are enjoyable [10]. Pleasure is a passive reaction that derives from the experience or prediction of reward and may lead to a long-lasting state of happiness. The word happiness is difficult to define. In fact, just obtaining physical pleasure may not be enough. One key to happiness involves a network of good friends. However, it is not obvious how the higher forms of satisfaction and pleasure are related to an ice cream cone, or to your team winning a sporting event. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure [14]. Pleasure as a hallmark of reward is sufficient for defining a reward, but it may not be necessary. A reward may generate positive learning and approach behavior simply because it contains substances that are essential for body function. When we are hungry, we may eat bad and unpleasant meals. A monkey who receives hundreds of small drops of water every morning in the laboratory is unlikely to feel a rush of pleasure every time it gets the 0.1 ml. Nevertheless, with these precautions in mind, we may define any stimulus, object, event, activity, or situation that has the potential to produce pleasure as a reward. In the context of reward deficiency or for disorders of addiction, homeostasis pursues pharmacological treatments: drugs to treat drug addiction, obesity, and other compulsive behaviors. The theory of allostasis suggests broader approaches - such as re-expanding the range of possible pleasures and providing opportunities to expend effort in their pursuit. [15]. It is noteworthy, the first animal studies eliciting approach behavior by electrical brain stimulation interpreted their findings as a discovery of the brain's pleasure centers [16] which were later partly associated with midbrain dopamine neurons [17–19] despite the notorious difficulties of identifying emotions in animals. Evolutionary theories of pleasure: The love connection BO:D Charles Darwin and other biological scientists that have examined the biological evolution and its basic principles found various mechanisms that steer behavior and biological development. Besides their theory on natural selection, it was particularly the sexual selection process that gained significance in the latter context over the last century, especially when it comes to the question of what makes us "what we are," i.e., human. However, the capacity to sexually select and evolve is not at all a human accomplishment alone or a sign of our uniqueness; yet, we humans, as it seems, are ingenious in fooling ourselves and others–when we are in love or desperately search for it. It is well established that modern biological theory conjectures that **organisms are** the **result of evolutionary competition.** In fact, Richard Dawkins stresses gene survival and propagation as the basic mechanism of life [20]. Only genes that lead to the fittest phenotype will make it. It is noteworthy that the phenotype is selected based on behavior that maximizes gene propagation. To do so, the phenotype must survive and generate offspring, and be better at it than its competitors. Thus, the ultimate, distal function of rewards is to increase evolutionary fitness by ensuring the survival of the organism and reproduction. It is agreed that learning, approach, economic decisions, and positive emotions are the proximal functions through which phenotypes obtain other necessary nutrients for survival, mating, and care for offspring. Behavioral reward functions have evolved to help individuals to survive and propagate their genes. Apparently, people need to live well and long enough to reproduce. Most would agree that homo-sapiens do so by ingesting the substances that make their bodies function properly. For this reason, foods and drinks are rewards. Additional rewards, including those used for economic exchanges, ensure sufficient palatable food and drink supply. Mating and gene propagation is supported by powerful sexual attraction. Additional properties, like body form, augment the chance to mate and nourish and defend offspring and are therefore also rewards. Care for offspring until they can reproduce themselves helps gene propagation and is rewarding; otherwise, many believe mating is useless. According to David E Comings, as any small edge will ultimately result in evolutionary advantage [21], additional reward mechanisms like novelty seeking and exploration widen the spectrum of available rewards and thus enhance the chance for survival, reproduction, and ultimate gene propagation. These functions may help us to obtain the benefits of distant rewards that are determined by our own interests and not immediately available in the environment. Thus the distal reward function in gene propagation and evolutionary fitness defines the proximal reward functions that we see in everyday behavior. That is why foods, drinks, mates, and offspring are rewarding. There have been theories linking pleasure as a required component of health benefits salutogenesis, (salugenesis). In essence, under these terms, pleasure is described as a state or feeling of happiness and satisfaction resulting from an experience that one enjoys. Regarding pleasure, it is a double-edged sword, on the one hand, it promotes positive feelings (like mindfulness) and even better cognition, possibly through the release of dopamine [22]. But on the other hand, pleasure simultaneously encourages addiction and other negative behaviors, i.e., motivational toxicity. It is a complex neurobiological phenomenon, relying on reward circuitry or limbic activity. It is important to realize that through the "Brain Reward Cascade" (BRC) endorphin and endogenous morphinergic mechanisms may play a role [23]. While natural rewards are essential for survival and appetitive motivation leading to beneficial biological behaviors like eating, sex, and reproduction, crucial social interactions seem to further facilitate the positive effects exerted by pleasurable experiences. Indeed, experimentation with addictive drugs is capable of directly acting on reward pathways and causing deterioration of these systems promoting hypodopaminergia [24]. Most would agree that pleasurable activities can stimulate personal growth and may help to induce healthy behavioral changes, including stress management [25]. The work of Esch and Stefano [26] concerning the link between compassion and love implicate the brain reward system, and pleasure induction suggests that social contact in general, i.e., love, attachment, and compassion, can be highly effective in stress reduction, survival, and overall

health. Understanding the role of neurotransmission and pleasurable states both positive and negative have been adequately studied over many decades [26–37], but comparative anatomical and neurobiological function between animals and homo sapiens appear to be required and seem to be in an infancy stage. Finding happiness is different between apes and humans As stated earlier in this expert opinion one key to happiness involves a network of good friends [38]. However, it is not entirely clear exactly how the higher forms of satisfaction and pleasure are related to a sugar rush, winning a sports event or even sky diving, all of which augment dopamine release at the reward brain site. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure. Remarkably, there are pathways for ordinary liking and pleasure, which are limited in scope as described above in this commentary. However, there are **many brain regions**, often termed hot and cold spots, that significantly **modulate** (increase or decrease) our **pleasure or** even produce **the opposite** of pleasure— that is disgust and fear [39]. One specific region of the nucleus accumbens is organized like a computer keyboard, with particular stimulus triggers in rows— producing an increase and decrease of pleasure and disgust. Moreover, the cortex has unique roles in the cognitive evaluation of our feelings of pleasure [40]. Importantly, the interplay of these multiple triggers and the higher brain centers in the prefrontal cortex are very intricate and are just being uncovered. Desire and reward centers It is surprising that many different sources of pleasure activate the same circuits between the mesocorticolimbic regions (Figure 1). Reward and desire are two aspects pleasure induction and have a very widespread, large circuit. Some part of this circuit distinguishes between desire and dread. The so-called pleasure circuitry called "REWARD" involves a well-known dopamine pathway in the mesolimbic system that can influence both pleasure and motivation. In simplest terms, the well-established mesolimbic system is a dopamine circuit for reward. It starts in the ventral tegmental area (VTA) of the midbrain and travels to the nucleus accumbens (Figure 2). It is the cornerstone target to all addictions. The VTA is encompassed with neurons using glutamate, GABA, and dopamine. The nucleus accumbens (NAc) is located within the ventral striatum and is divided into two sub-regions—the motor and limbic regions associated with its core and shell, respectively. The NAc has spiny neurons that receive dopamine from the VTA and glutamate (a dopamine driver) from the hippocampus, amygdala and medial prefrontal cortex. Subsequently, the NAc projects GABA signals to an area termed the ventral pallidum (VP). The region is a relay station in the limbic loop of the basal ganglia, critical for motivation, behavior, emotions and the "Feel Good" response. This defined system of the brain is involved in all addictions –substance, and non –substance related. In 1995, our laboratory coined the term "Reward Deficiency Syndrome" (RDS) to describe genetic and epigenetic induced hypodopaminergia in the "Brain Reward Cascade" that contribute to addiction and compulsive behaviors [3,6,41]. Furthermore, ordinary "liking" of something, or pure pleasure, is represented by small regions mainly in the limbic system (old reptilian part of the brain). These may be part of larger neural circuits. In Latin, hedus is the term for "sweet"; and in Greek, hodone is the term for "pleasure." Thus, the word Hedonic is now referring to various subcomponents of pleasure: some associated with purely sensory and others with more complex emotions involving morals, aesthetics, and social interactions. The capacity to have pleasure is part of being healthy and may even extend life, especially if linked to optimism as a dopaminergic response [42]. Psychiatric illness often includes symptoms of an abnormal inability to experience pleasure, referred to as anhedonia. A negative feeling state is called dysphoria, which can consist of many emotions such as pain, depression, anxiety, fear, and disgust. Previously many scientists used animal research to uncover the complex mechanisms of pleasure, liking, motivation and even emotions like panic and fear, as discussed above [43]. However, as a significant amount of related research about the specific brain regions of pleasure/reward circuitry has been derived from invasive studies of animals, these cannot be directly compared with subjective states experienced by humans. In an attempt to resolve the controversy regarding the causal contributions of mesolimbic dopamine systems to reward, we have previously evaluated the three-main competing explanatory categories: "liking," "learning," and "wanting" [3]. That is, dopamine may mediate (a) liking: the hedonic impact of reward, (b) learning: learned predictions about rewarding effects, or (c) wanting: the pursuit of rewards by attributing incentive salience to reward-related stimuli [44]. We have evaluated these hypotheses, especially as they relate to the RDS, and we find that the incentive salience or "wanting" hypothesis of dopaminergic functioning is supported by a majority of the scientific evidence. Various neuroimaging studies have shown that anticipated behaviors such as sex and gaming, delicious foods and drugs of abuse all affect brain regions associated with reward networks, and may not be unidirectional. Drugs of abuse enhance dopamine signaling which sensitizes mesolimbic brain mechanisms that apparently evolved explicitly to attribute incentive salience to various rewards [45]. Addictive substances are voluntarily self-administered, and they enhance (directly or indirectly) dopaminergic synaptic function in the NAc. This activation of the brain reward networks (producing the ecstatic "high" that users seek). Although these circuits were initially thought to encode a set point of hedonic tone, it is now being considered to be far more complicated in function, also encoding attention, reward expectancy, disconfirmation of reward expectancy, and incentive motivation [46]. The argument about addiction as a disease may be confused with a predisposition to substance and nonsubstance rewards relative to the extreme effect of drugs of abuse on brain neurochemistry. The former sets up an individual to be at high risk through both genetic polymorphisms in reward genes as well as harmful epigenetic insult. Some Psychologists, even with all the data, still infer that addiction is not a disease [47]. Elevated stress levels, together with polymorphisms (genetic variations) of various dopaminergic genes and the genes related to other neurotransmitters (and their genetic variants), and may have an additive effect on vulnerability to various addictions [48]. In this regard, Vanyukov, et al. [48] suggested based on review that whereas the gateway hypothesis does not specify mechanistic connections between "stages," and does not extend to the risks for addictions the concept of common liability to addictions may be more parsimonious. The latter theory is grounded in genetic theory and supported by data identifying common sources of variation in the risk for specific addictions (e.g., RDS). This commonality has identifiable neurobiological substrate and plausible evolutionary explanations. Over many years the controversy of dopamine involvement in especially "pleasure" has led to confusion concerning separating motivation from actual pleasure (wanting versus liking) [49]. We take the position that animal studies cannot provide real clinical information as described by self-reports in humans. As mentioned earlier and in the abstract, on November 23rd, 2017, evidence for our concerns was discovered [50] In essence, although nonhuman primate brains are similar to our own, the disparity between other primates and those of human cognitive abilities tells us that surface similarity is not the whole story. Sousa et al. [50] small case found various differentially expressed genes, to associate with pleasure related systems. Furthermore, the dopaminergic interneurons located in the human neocortex were absent from the neocortex of nonhuman African apes. Such differences in neuronal transcriptional programs may underlie a variety of neurodevelopmental disorders. In simpler terms, the system controls the production of dopamine, a chemical messenger that plays a significant role in pleasure and rewards. The senior author, Dr. Nenad Sestan from Yale, stated: "Humans have evolved a dopamine system that is different than the one in chimpanzees." This may explain why the behavior of humans is so unique from that of non-human primates, even though our brains are so surprisingly similar, Sestan said: "It might also shed light on why people are vulnerable to mental disorders such as autism (possibly even addiction)." Remarkably, this research finding emerged from an extensive, multicenter collaboration to compare the brains across several species. These researchers examined 247 specimens of neural tissue from six humans, five chimpanzees, and five macaque monkeys. Moreover, these investigators analyzed which genes were turned on or off in 16 regions of the brain. While the differences among species were subtle, **there was** a **remarkable contrast in** the **neocortices**, specifically in an area of the brain that is much more developed in humans than in chimpanzees. In fact, these researchers found that a gene called tyrosine hydroxylase (TH) for the enzyme, responsible for the production of dopamine, was expressed in the neocortex of humans, but not chimpanzees. As discussed earlier, dopamine is best known for its essential role within the brain's reward system; the very system that responds to everything from sex, to gambling, to food, and to addictive drugs. However, dopamine also assists in regulating emotional responses, memory, and movement. Notably, abnormal dopamine levels have been linked to disorders including Parkinson's, schizophrenia and spectrum disorders such as autism and addiction or RDS. Nora Volkow, the director of NIDA, pointed out that one alluring possibility is that the neurotransmitter dopamine plays a substantial role in humans' ability to pursue various rewards that are perhaps months or even years away in the future. This same idea has been suggested by Dr. Robert Sapolsky, a professor of biology and neurology at Stanford University. Dr. Sapolsky cited evidence that dopamine levels rise dramatically in humans when we anticipate potential rewards that are uncertain and even far off in our futures, such as retirement or even the possible alterlife. This may explain what often motivates people to work for things that have no apparent short-term benefit [51]. In similar work, Volkow and Bale [52] proposed a model in which dopamine can favor NOW processes through phasic signaling in reward circuits or LATER processes through tonic signaling in control circuits. Specifically, they suggest that through its modulation of the orbitofrontal cortex, which processes salience attribution, dopamine also enables shilting from NOW to LATER, while its modulation of the insula, which processes interoceptive information, influences the probability of selecting NOW versus LATER actions based on an individual's physiological state. This hypothesis further supports the concept that disruptions along these circuits contribute to diverse pathologies, including obesity and addiction or RDS.

2] Actor spec—governments must use util because they don't have intentions and are constantly dealing with tradeoffs—outweighs since different agents have different obligations—takes out calc indicts since they are empirically denied.

Outweighs –

A] Most articles about IP are written through util – means other frameworks can never engage with core questions of the lit and decks predictability – equal topic lit means fair ground.

1AC – Underview

1] 1AR theory is legit – anything else means infinite abuse – drop the debater, competing interps, and the highest layer – 1AR are too short to make up for the time trade-off – no RVIs – 6 min 2NR means they can brute force me every time.