# 1AC v Lake Highland IK

## Case

### plan [v2] – 0:07

#### Thus, the Plan: The member nations of the World Trade Organization ought to reduce intellectual property protections for medicines.

### pandemic [v2]

#### The pandemic is raging across the globe – vaccines are our only safeguard

Steenhuysen 7/21

Julie Steenhuysen, Alistair Smout and Ari Rabinovitch Reuters, 7-26, 21, How the Delta Variant Upends Assumptions About the Coronavirus, [https://www.usnews.com/news/top-news/articles/2021-07-26/how-the-delta-variant-upends-assumptions-about-the-coronavirus //](https://www.usnews.com/news/top-news/articles/2021-07-26/how-the-delta-variant-upends-assumptions-about-the-coronavirus%20//) Phoenix

The Delta variant is the fastest, fittest and most formidable version of the coronavirus that causes COVID-19 the world has encountered, and it is upending assumptions about the disease even as nations loosen restrictions and open their economies, according to virologists and epidemiologists. Vaccine protection remains very strong against severe disease and hospitalizations caused by any version of the coronavirus, and those most at risk are still the unvaccinated, according to interviews with 10 leading COVID-19 experts But the evidence is mounting that the Delta variant, first identified in India, is capable of infecting fully vaccinated people at a greater rate than previous versions, and concerns have been raised that they may even spread the virus, these experts said As a result, targeted use of masks, social distancing and other measures may again be needed even in countries with broad vaccination campaigns, several of them said. Israel recently reinstated mask-wearing requirements indoors and requires travelers to quarantine upon arrival. U.S. officials are considering whether to revise mask guidance for the vaccinated. Los Angeles County, the most populous in the United States, is again requiring masks even among the vaccinated in indoor public spaces. Even in Canada, where hospitalizations and COVID-19 cases continue to decline, national data from the Public Health Agency of Canada warns the Delta variant stands a chance of unravelling some of that progress. The data suggests that, despite ground gained on COVID-19 nationally, the Delta variant may result in “greater than previously expected resurgence this fall and winter.” “The biggest risk to the world at the moment is simply Delta,” said microbiologist Sharon Peacock, who runs Britain’s efforts to sequence the genomes of coronavirus variants, calling it the “fittest and fastest variant yet. The major worry about the Delta variant is not that it makes people sicker, but that it spreads far more easily from person to person, increasing infections and hospitalizations among the unvaccinated. Public Health England said on Friday that of a total of 3,692 people hospitalized in Britain with the Delta variant, 58.3 per cent were unvaccinated and 22.8 per cent were fully vaccinated In Canada, though COVID-19 cases are declining, Variants of Concern represent the majority of reported COVID-19 cases — approximately 70 per cent. For the week of June 20, 2021, cases of the Delta variant sat at 39 per cent, while Alpha cases sat around 38 per cent — the first time the two variant cases were reported in similar proportions. In Singapore, where Delta is the most common variant, government officials reported on Friday that three-quarters of its coronavirus cases occurred among vaccinated individuals, though none were severely ill. Israeli health officials have said 60 per cent of current hospitalized COVID-19 cases are in vaccinated people. Most of them are age 60 or older and often have underlying health problems. In the United States, which has experienced more COVID-19 cases and deaths than any other country, the Delta variant represents about 83 per cent of new infections. So far, unvaccinated people represent nearly 97 per cent of severe cases. Dr. Monica Gandhi, an infectious diseases doctor at the University of California, San Francisco, said many vaccinated people are “so disappointed” that they are not 100% protected from mild infections. But the fact that nearly all Americans hospitalized with COVID-19 right now are unvaccinated “is pretty astounding effectiveness,” she said “There is always the illusion that there is a magic bullet that will solve all our problems. The coronavirus is teaching us a lesson,” said Nadav Davidovitch, director of Ben Gurion University’s school of public health in Israel. The Pfizer Inc/BioNTech vaccine, one of the most effective against COVID-19 so far, appeared only 41% effective at halting symptomatic infections in Israel over the past month as the Delta variant spread, according to Israeli government data. Israeli experts said this information requires more analysis before conclusions can be drawn. “Protection for the individual is very strong; protection for infecting others is significantly lower,” Davidovitch said. MA study in China found that people infected with the Delta variant carry 1,000 times more virus in their noses compared with the original version first identified in Wuhan in 2019. “You may actually excrete more virus and that’s why it’s more transmissible. That’s still being investigated,” Peacock said. Virologist Shane Crotty of the La Jolla Institute for Immunology in San Diego noted that Delta is 50% more infectious than the Alpha variant first detected in the UK. “It’s outcompeting all other viruses because it just spreads so much more efficiently,” Crotty said. Genomics expert Eric Topol, director of the Scripps Research Translational Institute in La Jolla, California, noted that Delta infections have a shorter incubation period and a far higher amount of viral particles. “That’s why the vaccines are going to be challenged. The people who are vaccinated have got to be especially careful. This is a tough one,” Topol said. In the United States, the Delta variant has taken hold just as many Americans – vaccinated and not – have stopped wearing masks indoors. “It’s a double whammy,” Topol said. “The last thing you want is to loosen restrictions when you’re confronting the most formidable version of the virus yet.” The development of highly effective vaccines may have led many people to believe that once vaccinated, COVID-19 posed little threat to them. “When the vaccines were first developed, nobody was thinking that they were going to prevent infection,” said Carlos del Rio, a professor of medicine and infectious disease epidemiology at Emory University in Atlanta. The aim was always to prevent severe disease and death, del Rio added.The vaccines were so effective, however, that there were signs they also prevented transmission against prior coronavirus variants. “We got spoiled,” he said.

#### TRIPS creates unchecked variants and a deep inequality – waiver is needed

Gupta and Namboodiri 2021

[Vineeta, Sreenath, Health Affairs, "America And The TRIPS Waiver: You Can Talk The Talk, But Will You Walk The Walk?" July 13, <https://www.healthaffairs.org/do/10.1377/hblog20210712.248782/full/> // Phoenix

The TRIPS waiver is critical to combating the COVID-19 pandemic around the world. Demand for the vaccine has already surpassed supply, with high-income countries taking a large share of reserved doses. Given that no single vaccine manufacturer could produce enough vaccines to meet the demand of the entire globe, supporters of the waiver ponder the ethics of multinational manufacturers holding exclusive rights to information and technology, preventing other companies from entering the markets that are not being served—primarily in low- and middle-income countries. Sharing vaccine-related information will not only help get the pandemic in check now, but it could also encourage firms to develop the next round of vaccines that will be necessary to address new variants.

The TRIPS waiver is critical to ensuring an equitable distribution of vaccines around the globe. High-income countries already have widespread vaccination campaigns well underway, while many low-income countries have yet to administer a single dose. Without a TRIPS waiver, the gap between vaccination rates in high-income and low- and middle-income countries (LMIC) will only widen.

#### The brink is now – lack of access creates vaccine-resistant variants

Barry 7/21

Robinson, 7-26, 21, What history tells us about the delta variant — and the variants that will follow, <https://www.washingtonpost.com/opinions/2021/07/26/what-history-tells-us-about-delta-variant-variants-that-will-follow/> John M. Barry is the author of “The Great Influenza: The Story of the Deadliest Pandemic in History” and Distinguished Scholar at Tulane University’s School of Public Health and Tropical Medicine. // Phoenix

As is obvious to everyone, the delta variant is surging. Given its infectiousness, this is hardly surprising; as covid-19 adapted to humans, variants became successively better at infecting people, and delta is more than three times as contagious as it was spreading last year. And delta is not the last variant we will see. This raises many questions, and the three most important are: Will it become more virulent — causing more serious disease and death? Will the virus escape the protection natural immunity and vaccines now afford? And, if the answer to either of the first two questions is yes, how can we respond? Right now, the best we can do is make educated guesses. There’s no solid information yet on delta’s virulence, although it seems more dangerous. It wreaked havoc in India, but it’s difficult to know how much of the death toll can be attributed to increased virulence and how much to an overwhelmed health-care system. Anecdotal accounts here also speak to increased virulence, including in younger adults. We also know that delta produces about 1,200 times the viral load of the original virus — and viral load correlates with severity and death. That fact is not comforting. Neither is history. All five influenza pandemics we have details about developed more virulent variants before settling down. The pandemic beginning in 1889 was more than twice as deadly in Britain in the second year as in the first, and in many countries the third year was deadlier still. Full coverage of the coronavirus pandemic In 1918′s epidemic, the first wave was both mild — the British Grand Fleet suffered 10,313 first wave cases but only four deaths — and not very transmissible. A variant caused an explosive second wave. The 1957 influenza pandemic led to a significant increase in deaths, but in 1960, after both a vaccine was developed and many people supposedly had immunity from prior infection, a variant caused peak mortality to exceed pandemic levels. In 1968, the United States saw the most deaths in the first year, but in Europe — again after a vaccine and naturally acquired immunity were in play — the second year was deadlier. During the 2009 influenza pandemic, variants emerged that caused breakthrough infections and increased viral loads and deaths in the United States, and studies found “greater burden of severe illness in the year after the pandemic” outside the United States as well As a general rule, viruses do eventually become less dangerous as they adapt to new hosts and as immune systems respond better. That should happen here eventually. But whether or not delta has increased in virulence, another still more dangerous variant may surface. That makes the next question even more important: Will covid-19, in some form, escape immune protection? The answer is: probably. Unless its opportunity to mutate is cut off by stopping its spread — an impossibility with billions worldwide unprotected by vaccine — eventually a variant will likely emerge that evades current vaccines and natural infection. Studies of coronaviruses that cause the common cold demonstrate that mutations over time cause the ability of antibodies to neutralize those viruses to decline.

#### This leads to 2 scenarios

#### Scenario 1 is variants:

#### Future mutations will cause extinction – it only takes one ‘super-spreader’

Bar-Yam 16

Yaneer Bar-Yam 7-3-2016 “Transition to extinction: Pandemics in a connected world” <http://necsi.edu/research/social/pandemics/transition> (Professor and President, New England Complex System Institute; PhD in Physics, MIT)//Elmer rc by Phoenix

Watch as one of the more aggressive—brighter red — strains rapidly expands. After a time it goes extinct leaving a black region. Why does it go extinct? The answer is that it spreads so rapidly that it kills the hosts around it. Without new hosts to infect it then dies out itself. That the rapidly spreading pathogens die out has important implications for evolutionary research which we have talked about elsewhere [1–7]. In the research I want to discuss here, what we were interested in is the effect of adding long range transportation [8]. This includes natural means of dispersal as well as unintentional dispersal by humans, like adding airplane routes, which is being done by real world airlines (Figure 2). When we introduce long range transportation into the model, the success of more aggressive strains changes. They can use the long range transportation to find new hosts and escape local extinction. Figure 3 shows that the more transportation routes introduced into the model, the more higher aggressive pathogens are able to survive and spread. As we add more long range transportation, there is a critical point at which pathogens become so aggressive that the entire host population dies. The pathogens die at the same time, but that is not exactly a consolation to the hosts. We call this the phase transition to extinction (Figure 4). With increasing levels of global transportation, human civilization may be approaching such a critical threshold. In the paper we wrote in 2006 about the dangers of global transportation for pathogen evolution and pandemics [8], we mentioned the risk from Ebola. Ebola is a horrendous disease that was present only in isolated villages in Africa. It was far away from the rest of the world only because of that isolation. Since Africa was developing, it was only a matter of time before it reached population centers and airports. While the model is about evolution, it is really about which pathogens will be found in a system that is highly connected, and Ebola can spread in a highly connected world. The traditional approach to public health uses historical evidence analyzed statistically to assess the potential impacts of a disease. As a result, many were surprised by the spread of Ebola through West Africa in 2014. As the connectivity of the world increases, past experience is not a good guide to future events. A key point about the phase transition to extinction is its suddenness. Even a system that seems stable, can be destabilized by a few more long-range connections, and connectivity is continuing to increase. So how close are we to the tipping point? We don’t know but it would be good to find out before it happens. While Ebola ravaged three countries in West Africa, it only resulted in a handful of cases outside that region. One possible reason is that many of the airlines that fly to west Africa stopped or reduced flights during the epidemic [9]. In the absence of a clear connection, public health authorities who downplayed the dangers of the epidemic spreading to the West might seem to be vindicated. As with the choice of airlines to stop flying to west Africa, our analysis didn’t take into consideration how people respond to epidemics. It does tell us what the outcome will be unless we respond fast enough and well enough to stop the spread of future diseases, which may not be the same as the ones we saw in the past. As the world becomes more connected, the dangers increase. Are people in western countries safe because of higher quality health systems? Countries like the U.S. have highly skewed networks of social interactions with some very highly connected individuals that can be “superspreaders.” The chances of such an individual becoming infected may be low but events like a mass outbreak pose a much greater risk if they do happen. If a sick food service worker in an airport infects 100 passengers, or a contagion event happens in mass transportation, an outbreak could very well prove unstoppable.

#### Scenario 2 is the econ

#### Great power war goes nuclear

Talmadge 18 [Caitlin Talmadge is Associate Professor of Security Studies at the Edmund A. Walsh School of Foreign Service at Georgetown University. This essay is adapted from “Would China Go Nuclear? Assessing the Risk of Chinese Nuclear Escalation in a Conventional War With the United States,” International Security, Spring 2017. Beijing’s Nuclear Option: Why a U.S.-Chinese War Could Spiral Out of Control. 2018. https://www.foreignaffairs.com/articles/china/2018-10-15/beijings-nuclear-option]

As China’s power has grown in recent years, so, too, has the risk of war with the United States. Under President Xi Jinping, China has increased its political and economic pressure on Taiwan and built military installations on coral reefs in the South China Sea, fueling Washington’s fears that Chinese expansionism will threaten U.S. allies and influence in the region. U.S. destroyers have transited the Taiwan Strait, to loud protests from Beijing. American policymakers have wondered aloud whether they should send an aircraft carrier through the strait as well. Chinese fighter jets have intercepted U.S. aircraft in the skies above the South China Sea. Meanwhile, U.S. President Donald Trump has brought long-simmering economic disputes to a rolling boil.

A war between the two countries remains unlikely, but the prospect of a military confrontation—resulting, for example, from a Chinese campaign against Taiwan—no longer seems as implausible as it once did. And the odds of such a confrontation going nuclear are higher than most policymakers and analysts think.

Members of China’s strategic com­munity tend to dismiss such concerns. Likewise, U.S. studies of a potential war with China often exclude nuclear weapons from the analysis entirely, treating them as basically irrelevant to the course of a conflict. Asked about the issue in 2015, Dennis Blair, the former commander of U.S. forces in the Indo-Pacific, estimated the likelihood of a U.S.-Chinese nuclear crisis as “somewhere between nil and zero.”

This assurance is misguided. If deployed against China, the Pentagon’s preferred style of conventional warfare would be a potential recipe for nuclear escalation. Since the end of the Cold War, the United States’ signature approach to war has been simple: punch deep into enemy territory in order to rapidly knock out the opponent’s key military assets at minimal cost. But the Pentagon developed this formula in wars against Afghanistan, Iraq, Libya, and Serbia, none of which was a nuclear power.

#### Econ collapse is the most probable scenario for war.

Elhefnawy 11 Nader Elhefnawy (professor of English at the University of Miami, writer on IR published in peer-reviewed journals including International Security, Astropolitics, and Survival). “Twenty Years After the Cold War: A Strategic Survey,” Parameters, The U.S. Army War College Quarterly. Spring 2011. <http://strategicstudiesinstitute.army.mil/pubs/parameters/Articles/2011spring/Ehlefnawy.pdf>

Relative calm has prevailed among the great powers since the demise of the Soviet Union. Large-scale warfare remains a possibility, but by and large interstate war has been confined to the margins of the international system, and limited in its intensity, with the operational realities of the world’s major armed forces characterized by alternative missions. Neoliberal globalization has been robust but economically problematic, characterized by slow growth, financial instability, and other factors contributing to social and political stress. East Asia, and especially China, constituted the principal exception to the slow growth characterizing these decades. East Asia has massively increased its share of world manufacturing, exports, and exchange reserves, while at the same time the EU expanded and consolidated the continent’s resources, with some “game-changing” implications (like the euro). Additionally, rising commodity prices have resulted in booms among resource exporters, particularly energy exporters, which have also permitted these nations to enjoy greater political leverage. As a result, while the United States remains in a class of its own with regard to military power, and its large national market, there have been some substantial shifts in economic power from the United States and Japan to other actors over the past two decades. This is particularly true of China, the EU, and a select number of energy exporters, resulting in a more complex and diffuse distribution of power. At the same time the relationships of the major powers are less defined by concerns related to traditional, state-centered threats than at any time since the nineteenth century, if not earlier. While these may not be the traditional threats, they do present an unprecedented array of non-traditional security concerns in areas like energy, the environment, and finance, and physical threats presented by non-state actors, such as international terrorism and high-seas piracy. Despite these mounting threats, cooperation has consistently fallen short of the levels hoped for in the early 1990s. Many of the current trends seem likely to continue through the foreseeable future. The interaction of the crises of the past several years (especially in energy and international finance) combined with long-mounting stresses in the global economy (slow growth, debt, ecological pressure) all raise the possibility of changes in some areas of development, particularly if these changes impact the world’s three principal loci of economic power: China, the European Union, and the United States. China may continue to grow rapidly, though perhaps less so as it matures, and begins to pursue goals beyond the mere maximizing of GDP. Even if the EU’s attempts at integration and expansion recede (as is plausible), Europe as a whole is likely to remain powerful, even if that power is less extensive and well-organized. Meanwhile the US position is not unlike what the “declinists” of the 1980s and early 1990s anticipated. The most significant direct challenges to the United States some twenty years after the Cold War are not military, but economic: deindustrialization, balance of payments problems, debt, and surviving inside an ever-more integrated global economy and strained ecosystem. Relations among the great powers may yet grow more intense, but economic crisis seems the most likely cause of any future conflict, with the less traditional dimensions of security presenting the most realistic obstacles to the United States’ freedom of action if such events ever do materialize.

#### Nuke war causes extinction

Edwards 17 [Paul N. Edwards, CISAC’s William J. Perry Fellow in International Security at Stanford’s Freeman Spogli Institute for International Studies. Being interviewed by EarthSky. How nuclear war would affect Earth’s climate. September 8, 2017. earthsky.org/human-world/how-nuclear-war-would-affect-earths-climate] **Note, we are only reading parts of the interview that are directly from Paul Edwards -- MMG**

In the nuclear conversation, what are we not talking about that we should be?

We are not talking enough about the climatic effects of nuclear war. The “nuclear winter” theory of the mid-1980s played a significant role in the arms reductions of that period. But with the collapse of the Soviet Union and the reduction of U.S. and Russian nuclear arsenals, this aspect of nuclear war has faded from view. That’s not good. In the mid-2000s, climate scientists such as Alan Robock (Rutgers) took another look at nuclear winter theory. This time around, they used much-improved and much more detailed climate models than those available 20 years earlier. They also tested the potential effects of smaller nuclear exchanges. The result: an exchange involving just 50 nuclear weapons — the kind of thing we might see in an India-Pakistan war, for example — could loft 5 billion kilograms of smoke, soot and dust high into the stratosphere. That’s enough to cool the entire planet by about 2 degrees Fahrenheit (1.25 degrees Celsius) — about where we were during the Little Ice Age of the 17th century. Growing seasons could be shortened enough to create really significant food shortages. So the climatic effects of even a relatively small nuclear war would be planet-wide. What about a larger-scale conflict? A U.S.-Russia war currently seems unlikely, but if it were to occur, hundreds or even thousands of nuclear weapons might be launched. The climatic consequences would be catastrophic: global average temperatures would drop as much as 12 degrees Fahrenheit (7 degrees Celsius) for up to several years — temperatures last seen during the great ice ages. Meanwhile, smoke and dust circulating in the stratosphere would darken the atmosphere enough to inhibit photosynthesis, causing disastrous crop failures, widespread famine and massive ecological disruption. The effect would be similar to that of the giant meteor believed to be responsible for the extinction of the dinosaurs. This time, we would be the dinosaurs. Many people are concerned about North Korea’s advancing missile capabilities. Is nuclear war likely in your opinion? At this writing, I think we are closer to a nuclear war than we have been since the early 1960s. In the North Korea case, both Kim Jong-un and President Trump are bullies inclined to escalate confrontations. President Trump lacks impulse control, and there are precious few checks on his ability to initiate a nuclear strike. We have to hope that our generals, both inside and outside the White House, can rein him in. North Korea would most certainly “lose” a nuclear war with the United States. But many millions would die, including hundreds of thousands of Americans currently living in South Korea and Japan (probable North Korean targets). Such vast damage would be wrought in Korea, Japan and Pacific island territories (such as Guam) that any “victory” wouldn’t deserve the name. Not only would that region be left with horrible suffering amongst the survivors; it would also immediately face famine and rampant disease. Radioactive fallout from such a war would spread around the world, including to the U.S. It has been more than 70 years since the last time a nuclear bomb was used in warfare. What would be the effects on the environment and on human health today? To my knowledge, most of the changes in nuclear weapons technology since the 1950s have focused on making them smaller and lighter, and making delivery systems more accurate, rather than on changing their effects on the environment or on human health. So-called “battlefield” weapons with lower explosive yields are part of some arsenals now — but it’s quite unlikely that any exchange between two nuclear powers would stay limited to these smaller, less destructive bombs.

### Bioterror Adv

#### COVID-19 has heightened and exposed vulnerabilities for bioterror

Trushar and D’Souza 7/21

Trushar R. Patel Associate Professor and Canada Research Chair, and Michael Hilary D'Souza Masters Student. “Coronavirus Is Not a Bioweapon - but Bioterrorism Is a Real Future Threat.” The Conversation, 8 July 2021, theconversation.com/coronavirus-is-not-a-bioweapon-but-bioterrorism-is-a-real-future-threat-135984. // Phoenix

The pandemic’s effect on the world isn’t a conventional attack on government targets or the military. Rather, it’s a widespread and indiscriminate attack on [global citizens and the economy](https://www.bbc.com/news/business-51706225). This outbreak has directly impacted the lives of billions of people, making it the most effective model for future terrorist activities and a new model for circumventing the conventions of modern warfare.

Striking at international vulnerabilities

An act of bioterrorism could have the same effect on our lives and the economy. Terrorist organizations actively seek to cripple a target economy through the employment of simple technologies in coordinated and sophisticated attacks on key infrastructure. This has normally ranged between simple targeted shootings and improvised explosives but can also include biochemical weapons such as [mustard gas](https://www.theguardian.com/world/2017/jan/29/chemical-weapons-found-in-mosul-in-isis-lab-say-iraqi-forces).

Locally, we are aware that Canada’s economy is especially vulnerable to sudden global shockwaves. This is largely because of our subsistence on resource development projects like oil and natural gas, and our [bottle-necked relationships with the United States](https://nationalpost.com/news/canada/house-speaker-pelosi-announces-agreement-on-north-american-trade-pact-to-replace-nafta).

A little less than 10 per cent of Canada’s economy is dependent on mining, agriculture and [resource extraction](https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610043403), combined with another 10 per cent contributed by manufacturing. A strike to any of these industries would ripple insecurities across the country and hurt a fifth of Canada’s GDP.

For instance, a key infrastructure in Canada is the rail corridor that operates from coast-to-coast. The corridor is already overburdened with the transport of crude oil and mired in [rail derailments](https://www.cbc.ca/news/canada/saskatchewan/rail-slow-down-impact-1.5457262) that cause disruptions to the national economy. The combined price drop in oil and the Canadian National Rail blockades initiated by the [Wet’suwet’en solidarity movement](https://www.bbc.com/news/world-us-canada-51550821) against the Coastal GasLink Pipeline created [market volatility](https://www.cbc.ca/news/politics/tasker-teck-frontier-future-oilsands-1.5475658) and invariably shutdown Canada’s ability to transport goods, causing [temporary layoffs](https://www.thechronicleherald.ca/business/reuters/canada-loses-record-2-million-jobs-temporary-layoffs-add-more-pain-447387/) and concern from [foreign investors](https://business.financialpost.com/news/economy/choke-point-how-the-blockade-movement-has-sent-tremors-across-canadas-economy-and-beyond) developing the project.

Although the [economic impact](https://www.cbc.ca/news/politics/rail-blockades-economic-impact-1.5497236) of the blockades was low compared to the pandemic, the effect of disruption is important. It demonstrates the ease with which foreign and domestic terrorists can operate to undermine Canadian sovereignty and stability by targeting a few, important Canadian industries.

The effect of the blockades stalling trade and forcing [temporary layoffs](https://www.ctvnews.ca/business/cn-employees-heading-back-to-work-after-temporary-layoffs-as-blockades-wind-down-1.4836665) is similar in consequence to the imposed self-isolation preventing Canadians from working, generating income and consuming commodities.

Consistent [unemployment](https://www.macleans.ca/economy/economicanalysis/coronavirus-plunges-canadas-economy-into-the-abyss/) and spending reductions in Canada can also produce a snowball effect that inches towards recession. Regardless of its size, a targeted attack can disrupt a nation enough to create instability and panic, which is the intent of terrorist groups that cannot compete equally with industrially backed, modern militaries.

Opportunity and expertise

The feasibility of designing and dispersing biological weapons varies in difficulty depending on the biological agent in question. For instance, [Bacillus anthracis](https://www.cdc.gov/anthrax/index.html), an exceptionally deadly and versatile pathogenic bacterium that causes the disease anthrax, is naturally occurring in the environment and can infect humans and animals. Anthrax has recently emerged from [thawing permafrost due to the effects of climate change](https://www.theguardian.com/world/2016/oct/09/reindeer-to-be-culled-in-russias-far-north-due-to-anthrax-outbreak), and manages to persist in harsh climates and environments demonstrating its versatility.

Acquiring anthrax is relatively easy and its highly infectious spores can enter the body through inhalation of aerosols or ingestion via contaminated water supplies. Consequently, anthrax is considered one of the leading [potential bioweapons](https://www.medicalnewstoday.com/articles/321030#Bioterrorism:-Modern-concerns). In 2001, five people in the United States died after receiving mail contaminated with anthrax — [no one was caught or charged](https://www.npr.org/2011/02/15/93170200/timeline-how-the-anthrax-terror-unfolded).

Conversely, the employment of synthetic biology to engineer novel bioweapons from pre-existing pathogens using [CRISPR or DNA synthesis](https://cen.acs.org/biological-chemistry/synthetic-biology/Synthetic-biology-enable-bioweapons-development/96/i26) is far more demanding in terms of laboratory requirements and expertise.

The manipulation and handling of these agents have been made more accessible by biotechnology companies competing aggressively for the attention of academic, corporate and [government funding](https://www.theguardian.com/global-development/2014/feb/21/3d-printing-offer-developing-savings-replica-kit).

With strict deadlines and finite resources, researchers value methods that provide reproducible and reliable results. This has been especially encouraging for the development of new technologies like [CRISPR](https://www.scientificamerican.com/article/mail-order-crispr-kits-allow-absolutely-anyone-to-hack-dna/), whose competitive market has made gene-editing accessible and cost effective.

Researchers have also supplemented their laboratories [3D-printed equipment](https://www.nature.com/articles/d41586-018-07853-5), making complex instruments that were once costly and out-of-reach easily accessible to anyone interested in biotechnology. This allows the convenient development of weapons to occur anywhere from stringent, regulated laboratories to remote facilities and [even in one’s own garage](https://www.forbes.com/sites/fernandezelizabeth/2019/09/19/yes-people-can-edit-the-genome-in-their-garage-can-they-be-regulated/#7ff06edd768b).

While countries like the U.S. and [Russia](https://www.nti.org/learn/countries/russia/biological/) inherited advanced biological weapons programmes from the Cold War, rogue nations like [North Korea](https://www.nytimes.com/2019/01/15/science/north-korea-biological-weapons.html) and terrorist organisations like [al-Qaida](https://www.jstor.org/stable/26369585) are actively seeking to develop programs and infrastructure for their own use and deterrence against foreign interference. With easily obtainable and simple technologies, the ability to invest in an underground bioweapons program is widely available.

All that is necessary to bridge the gap is talent.

A common myth appears to exemplify terrorist members as being [uneducated individuals](https://www.theguardian.com/world/2016/oct/05/islamic-state-recruits-world-bank-study-education-boko-haram). However, at its peak, the Islamic State of Iraq and the Levant (ISIS) recruited a variety of educated professionals ranging from [engineers](https://www.macleans.ca/news/world/why-do-so-many-jihadis-have-engineering-degrees/) to [medical doctors](https://www.ctvnews.ca/world/recruiting-professionals-doctors-join-the-isis-fight-1.2295241). [ISIS operated](https://www.theguardian.com/cities/2018/jan/29/bureaucracy-evil-isis-run-city-mosul) in the Middle East as any nation state would, with municipal bureaucracies, tax collection, road-building, infrastructural developments and hospitals.

Terrorist organizations tend to have the same infrastructural and scientific capabilities as modern industrial nations, allowing them to potentially develop biochemical arsenals. The infrastructure requirements for biological weapons programs are also made easier by being [comparatively cheaper and more versatile than a nuclear arsenal](https://www.wired.com/2017/03/thank-goodness-nukes-expensive-complicated/). This is largely because they can be masked by developments in medical industry, health and [agricultural research](https://cosmosmagazine.com/biology/researchers-fear-us-agricultural-research-masks-bioweapons-development).

#### IPR gives patent holders complete control of solutions and forces responses to go through a deep, slow bureaucratic process creating a near-impossible obstacle course for any bioterror solutions

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B. The Propriety of Article 30 of the TRIPS Agreement for Bi0terrorism- Induced Diseases

Article 30 of the TRIPS Agreement allows for derogation from patent exclusivity on grounds of "exceptional use" by imposing three distinctive, but cumulative, exceptions on Article 28(1) of the TRIPS' patents exclusivity: (1) the exceptional use must be limited; (2) the exceptional use may not unreasonably conï¬‚ict with the normal exploitation of the patent; (3) the exceptional use may not unreasonably prejudice the legitimate interests of the patentee, taking into account the legitimate interests of third parties.28Â° The pertinent question is whether Article 30 of TRIPS could be used in sourcing crucial drugs and vaccines in bioterrorism-induced public health crises. The negotiating history of Article 30 and the Canada-Patent Protection cases offer some insights into the scope and usefulness of Article 30 in this respect. The Canada patent case will be analyzed in detail due to the significant light it sheds on the prospect of Article 30 being used as a tool for the procurement of critical drugs in a public health pandemic or bioterrorism crisis.

The negotiating history of Article 30 of TRIPS indicates that it was originally designed to accommodate a wide range of specific, authorized exceptions. This included prior users' rights; private and non-commercial acts; experimental acts; manual preparation by pharmacists and medical doctors in accordance with a prescription, or acts perfonned with a medicine so prepared; acts done in reliance upon such acts not being prohibited by a valid claim as initially granted in a patent, but subsequently prohibited by a valid claim of that patent as amended; and governmental acts performed for government uses. 82 Apparently, these specific exceptions never made it to the final provisions of Article 30 as it is presently construed.283

In the Canada-Patent Protection case, the European Community challenged the consistency of Sections 55.2(l) and 55.2(2) of the Canadian Patent Act with Articles 27.1, 28, 30, and 33 of TRIPS. 284 Section 55.2(l) of Canada's Patent Act provided that a patent shall not be infringed if the patented invention is used or sold for uses that reasonably relate to the development and submission of information required under any Canadian law.28 This is otherwise known as the "regulatory review exception,"286 which is akin to the United States' Bolar exception in the Hatch-Waxman Act.287 However, Canada's patent law went beyond the Bolar exception in Section 55.2(2), by authorizing third parties to manufacture and stockpile patented pharmaceuticals during regulatory review processes, six months prior to the expiration of the patent term. 288 The WTO panel report examined the validity of the twin exceptions in Sections 55.2(1) & (2) of Canada's Patent Act vis-a-vis Article 30 of TRIPS. The panel found that Section 55.2(1), which embodied the regulatory review Bolar-type exception, was consistent with Articles 27.1 and 28.1 of TRIPS because it was authorized by Article 30 of TRIPS?"

In effect, the WTO panel sanctioned acts of manufacturers and suppliers of active pharmaceutical components, as well as producers of generic pharmaceuticals, provided such acts were reasonably related to marketing approval of a generic pharmaceutical product.29Â° The WTO panel. however, found that the stockpiling exception under section 55.2(2) of the Canadian Patent Act ran afoul of Article 28.1 of TRIPS because it was outside of the ambit of allowable exceptions under Article 30 of TRIPS.29' Therefore, Article 30 was narrowly construed.292

The WTO panel's ruling, severing the stockpiling exception from the regulatory review exception of Canada's patent law, demonstrates the narrow ambit of the limited exceptions allowable under Article 30 for the production of generic pharmaceuticals. It also unequivocally demonstrates that Article 30 of TRIPS is improper for the challenges of bioterrorism emergency situations; drug stockpiling, though of limited practical use,293 is arguably an integral logistical measure of bioterrorism preparedness.

Although the "limited exceptions" provision was narrowly construed, the precise parameters were left undefined by the WTO panel ruling, rendering it vague and vulnerable to semantic arguments.294 While any number of patent- limiting provisions could theoretically fit into its narrow confines, in practice, only those that are less threatening to patented inventions, like the experimental use exception as opined by the WTO panel in the Canada-Patent Protection case, would pass muster. 295

The inappropriateness of Article 30 for bioterrorism emergencies is further underscored by the cumulative nature of its three conditions.296 Non- compliance with any of the three provisions contravenes Article 30 as a whole.297 The following paragraphs will examine conditions two and three in an attempt to shed more light on their usefulness for securing crucial medicines in any bioterrorism context.

1. Conflict with Normal Exploitation of a Patent

The second condition of Article 30 of TRIPS requires that exceptions to the rights conferred should not unreasonably conflict with a normal exploitation of the patent.298 While TRIPS does not define "normal exploitation," the WTO panel in the Canada-Patent Protection case defined "normal" as "a normative standard of entitlement" and "what is common within a relevant community."299 The Panel went on to define "exploitation" as the "commercial activity by which patent owners employ their exclusive patent rights to extract economic value from their patent.” The panel summed up what it perceived as the essence of the second leg of Article 30 of TRIPS by stating that “[t]he normal practice of exploitation by patent owners, as with owners of any other intellectual property right, is to exclude all forms of competition that could detract significantly from the economic returns anticipated from a patent’s grant of market exclusivity.”

The panel's construction of the second prong of Article 30 was arguably too restrictive. Without a doubt, patent owners would love to exclude all forms of competition and breach stringent anti-competitive rules if they could do so. However, the TRIPS Agreement does not envisage an unbridled patent monopoly as evident in Article 3l(k), which enjoins against anti-competitive practice and would avail the grant of a compulsory license to loosen up any anti-competitive gridlock.3Â°2 If anything, the second condition of unreasonable conï¬‚ict with normal patent exploitation under Article 30 of TRIPS makes it nearly impossible to em loy the Article to acquire needed drugs in bioterrorism emergencies.3 3 Such a use would no doubt be an extreme measure vis-a-vis the stockpiling provision of section 55.2(2) (now repealed) of the Canadian Patent Act which the panel found invalid under Article 30 of TRIPS.

Furthermore, applying the second prong of Article 30 to the acquisition of crucial drugs for bioterrorism attacks could be complicated by a lack of a understanding of critical terms like limited exceptions, normal exploitation, or unreasonable conflict. The panel's proposition in this respect is too descriptive and very pro-patent. For instance, it is very unlikely that a WTO member could successfully parallel import crucial drugs for bioterrorism attacks via the second prong of Article 30. If Canada could fail to retain its drug stockpiling exception during the generic pharmaceuticals regulatory review process, any urgent measure aimed at securing crucial medicines for victims of bioterrorism attacks outside of the TRIPS systemic-bound provisions would be doomed to invalidity under Article 30 for unreasonably conflicting with the normal exploitation of the pharmaceutical patent in question.

#### **Biotech advancements allow for bioweapons to wipe out all of humanity by combining traits – the brink is now before the weapons are too powerful**

Millett and Snyder-Beattie 17 (Piers Millett and Andrew Snyder-Beattie; 2017; Health Security, Volume 15, Number 4; *“Existential Risk and Cost-Effective Biosecurity”*; accessed 8/13/21; <https://www.liebertpub.com/doi/pdf/10.1089/hs.2017.0028>; Piers Millett, PhD, is a Senior Research Fellow, and Andrew Snyder-Beattie, MS, is Director of Research; both at the University of Oxford, Future of Humanity Institute, Oxford, England.; page 374) HB rc // Phoenix

In the modern context, no single disease currently exists that combines the worst-case levels of transmissibility, lethality, resistance to countermeasures, and global reach. But many diseases are proof of principle that each worst-case attribute can be realized independently. For example, some diseases exhibit nearly a 100% case fatality ratio in the absence of treatment, such as rabies or septicemic plague. Other diseases have a track record of spreading to virtually every human community worldwide, such as the 1918 flu,10 and seroprevalence studies indicate that other pathogens, such as chickenpox and HSV-1, can successfully reach over 95% of a population.11,12 Under optimal virulence theory, natural evolution would be an unlikely source for pathogens with the highest possible levels of transmissibility, virulence, and global reach. But advances in biotechnology might allow the creation of diseases that combine such traits. Recent controversy has already emerged over a number of scientific experiments that resulted in viruses with enhanced transmissibility, lethality, and/or the ability to overcome therapeutics.13-17 Other experiments demonstrated that mousepox could be modified to have a 100% case fatality rate and render a vaccine ineffective.18 In addition to transmissibility and lethality, studies have shown that other disease traits, such as incubation time, environmental survival, and available vectors, could be modified as well.19-21 Although these experiments had scientific merit and were not conducted with malicious intent, their implications are still worrying. This is especially true given that there is also a long historical track record of state-run bioweapon research applying cutting-edge science and technology to design agents not previously seen in nature. The Soviet bioweapons program developed agents with traits such as enhanced virulence, resistance to therapies, greater environmental resilience, increased difficulty to diagnose or treat, and which caused unexpected disease presentations and outcomes.22 Delivery capabilities have also been subject to the cutting edge of technical development, with Canadian, US, and UK bioweapon efforts playing a critical role in developing the discipline of aerobiology.23,24 While there is no evidence of staterun bioweapons programs directly attempting to develop or deploy bioweapons that would pose an existential risk, the logic of deterrence and mutually assured destruction could create such incentives in more unstable political environments or following a breakdown of the Biological Weapons Convention.25The possibility of a war between great powers could also increase the pressure to use such weapons—during the World Wars, bioweapons were used across multiple continents, with Germany targeting animals in WWI,26 and Japan using plague to cause an epidemic in China during WWII.27 Non-state actors may also pose a risk, especially those with explicitly omnicidal aims. While rare, there are examples. The Aum Shinrikyo cult in Japan sought biological weapons for the express purpose of causing extinction.28 Environmental groups, such as the Gaia Liberation Front, have argued that ‘‘we can ensure Gaia’s survival only through the extinction of the Humans as a species. we now have the specific technology for doing the job. several different [genetically engineered] viruses could be released’’(quoted in ref. 29). Groups such as R.I.S.E. also sought to protect nature by destroying most of humanity with bioweapons.30 Fortunately, to date, non-state actors have lacked the capabilities needed to pose a catastrophic bioweapons threat, but this could change in future decades as biotechnology becomes more accessible and the pool of experienced users grows.31,3

## Other

### Framing – 0:32

#### The standard is maximizing expected well-being – Prefer

#### [1] Actor specificity – state actors can only use util – outweighs since different actors have different obligations.

#### A – Aggregation – all policies benefit some and hurts others – only util can resolve these cuz it gives a clear weighing mechanism

#### B – Collectivism – States are composed of many actors who inevitably disagree about intent means they can only use consequentialism because they don’t have to agree

#### C – Bureaucrats aren’t philosophers – policymakers do not have experience with dense frameworks so they don’t understand how to apply them to specific instances but they do understand that pain is bad and pleasure is good because it’s intrinsic to existing.

#### [2] Extinction first –

#### a. Wager – if there is any chance of goodness existing, we ought to preserve our existence to maximize it.

#### b. Sequencing – if their framework is true, people dying is bad because it means those people can’t use their framework

#### c. Repugnance – if their framework cannot explain why people dying is bad – you should reject it because it cannot disavow of atrocities. You shouldn’t vote for a framework that can’t say the holocaust was a bad thing.

#### d. Performativity – us having a moral debate proves moral uncertainty because it means we are not certain about which framework is true - means we should preserve our ability to find the true framework

### UV

#### 1. Aff gets 1AR theory and these paradigm issues

#### a. They can be infinitely abusive without a check in the 1N –

#### b. 1AR Theory is drop the debater to deter abuse

#### c. No RVIs because they could collapse to it in the 2N and win on a brute force 6v3 skew

#### d. Use Competing interps because reasonability is forcing the judge to intervene to determine what is and what isn’t reasonable

#### e. 1AR theory should be the highest layer – anything else would allow them to win every round since they would have a 13v7 advantage on theory with both the 1N and 2N when we only get the 1AR and 2AR.

#### f. no 2NR paradigm issues or recontextualizations to 1ar theory if paradigm issues were read in the 1ac – it’s equal to reading a new case turn in the 2n – you had the chance in the 1n to answer it.

#### g. Education is a voter because it controls the internal link to debate existing the first place – schools don’t fund uneducational games

#### h. Fairness is a voter because Debate is a competition which requires competitive equity – hence why we have equal speech times.