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#### Text: The member nations of the World Trade Organization ought to appoint an international panel of scientists including National Academies and corresponding organizations to decide if they should [reduce intellectual property protections by implementing a one and done approach to patent protections] and manage similar conflicts of interest between intellectual property. The panel should say yes to the proposal and member states must abide by that ruling.

#### International panel of science diplomats can rule over IP---that’s key to science diplomacy.

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At the global level, science diplomacy is defined as cooperation among countries in order to solve complex problems through scientific research and education (1). For example, science diplomacy plays an important role in resolving global issues related to the ecosystem (such as clean water, food safety, energy conservation, and preservation of the environment). It also addresses problems related to the healthcare industry. For example, scientists have served at the international level to forge the Middle Eastern Cancer Consortium a decade ago to facilitate better healthcare and improve cancer research in the region. Whether one considers science for diplomacy or diplomacy for science, international science collaborations benefit from allowing science diplomats (broadly defined as science envoys, science attaches, embassy fellows) to help establish positive international relationships between the U.S., Europe, Latin America, Africa or Asia, particularly when proprietary disputes arise (2, 3). These various types of science diplomats already exist; some, like embassy fellows and science envoys, have one-year appointments so their role may be limited, while attaches usually have two or three year appointments that may allow them to be more successful in long, protracted negotiations. In any event, we believe that scientists can play more of a role in advancing international scientific cooperation. A key point addressed here is how to balance security concerns against the need for free exchange of information needed for innovation and growth.

Both the National Science Foundation and the National Institutes of Health are already engaged in supporting American science and strengthening collaborations abroad. Such efforts take advantage of international expertise, facilities, and equipment. Here, we provide a rationale for the use of diplomacy to address scientific challenges. This approach allows some scientists working as diplomats to help manage complex and potentially conflicting situations that arise between scientific communities and their governments. Such issues include managing disputes such as licensing agreements for intellectual property (IP) and providing protection of IP.

International collaborations can not only support but also accelerate the advancement of science. However, collaborations may carry risk if IP is misappropriated for other purposes. International collaborations should have a basis in strategy and specific goals (for example, drug discovery) in order to justify the use of government and/or corporate funds.

About a decade ago, a group of academics from the University of Manchester in the United Kingdom assembled the “Manchester Manifesto,” subtitled “Who Owns Science” (6). This document addressed the lack of alignment between commercial interests, intellectual rights, and credit to the researcher. In our (and commonly held) view, the groups representing these disparate values could benefit from diplomatic mediation. More recently, it has become increasing apparent that managing China as a science and technology superpower represents another challenge for the U.S. Resolution of issues such as ownership of IP, rights to reagents, or use of skilled laboratory personnel from international collaborations may require the efforts of science diplomats. There are few international offices or “guardians” to protect junior and senior scientists in corporate or academic sectors from misuse of reagents or piracy.

China’s failure to respect IP rights, and the resulting piracy, has drawn much attention. The media have also focused on the failure of watchdog government agencies to detect and manage these unwanted activities. Industrial espionage compromises U.S. interests. Moreover, Chinese and Russian hackers have cyberattacked U.S. technology companies, financial institutions, media groups, and defense contractors. In 2018, industrial spying was even reported in a major medical school in New York City where scientists were alleged to have illegally shared research findings with Chinese companies.

The U.S. has a long history of hiring research personnel from other countries to staff its laboratories and industrial R&D centers. These scientists and engineers have made critical contributions to our nation’s well-being and security. These young Chinese and South Asian graduates of U.S. programs a generation ago now staff our research enterprise. However, recent trends in U.S. graduate school applications in science, technology, engineering and mathematics (STEM) reflect a downturn in foreign applicants, particularly from China. It is becoming increasingly apparent that the number of American-born students seeking STEM degrees is not sufficient to satisfy future demands of our high-tech workforce. While our own educational reforms must be augmented, we cannot ignore the need to continue to recruit overseas talent.

We believe that foreign scientists can continue to make critical discoveries in the U. S. provided that their talent is nurtured, developed, and harnessed for the common good. At the same time, American companies cannot hire foreign scientists if they take the ideas they generate in U.S. laboratories back to their home countries without proper credit or permission. If the advancement of science is to succeed, greater diplomatic cooperation is needed to solve and manage proprietary issues for the benefit of all (5, 6).

So, how does one strike the proper balance between security and growth? Science is a universal social enterprise; international conferences lead to friendships and productive collaborations between nations. Given that the U.S. and Chinese governments recognize the need for international communication and collaboration then surely there should be a mechanism for adjudicating anticipated conflicts. One approach would be for government, industrial, and academic stakeholders to form an international panel of scientists and engineers to manage any conflicts of interest between the need to protect proprietary information crucial to a company’s competitive edge, and the need for students and young faculty members to publish their findings. Smaller scale efforts along these lines have recently given rise to unique global partnerships, such as fellowship support by major pharmaceutical companies, which aim to address these conflicts to the benefit of both parties. An added feature of such arrangements is that they often provide corporate financing for research (9). Can this corporate-academic partnership model be adapted to multinational joint R&D efforts while protecting IP? This question falls squarely within the purview of international science diplomacy, whereby science diplomats can establish rules of conduct governing joint global technology development with proper IP protection.

Despite the highly publicized and legitimate piracy allegations against China, at least some data indicates that the Chinese legal system is responding positively to worldwide pressure to honor foreign IP. A 2016 study by Love, Helmers, and Eberhardt, for example, found that between 2006 and 2011, foreign companies brought over 10 percent of patent infringement cases in China, and won over 70 percent of those cases (10). Today, “win rates” average around 80 percent, and “injunction rates,” around 98 percent (10). As Chinese scientists and engineers increasingly enter the top tier of the innovation space, their growing awareness of their own need for IP protection could be a powerful motivating force for the protection of all IP. As stated earlier, science diplomats could catalyze this progress even further by direct negotiations with those parties involved in the conflicts. An obvious flaw in this optimistic outlook is that scientists in the U.S. wield more influence with their government than scientists in China wield with theirs. And to the extent that the Chinese government could be encouraging IP theft, this must be addressed first by those international companies/firms who want to do business with the Chinese. Chinese investments, as well as tech incubators and targeted acquisitions, can enable access to U.S. technologies for commercial development. Although this conveys a level of risk to the developers, it may provide valuable opportunities for U.S. companies as well. In many respects, the extensive engagement and collaboration in innovation between the U.S. and China, often characterized by open exchanges of ideas, talent, and technologies, can be mutually beneficial in enriching and accelerating innovation in both countries.

In summary, we believe that science diplomats could help address the increasingly complex issues that arise between accelerating scientific and engineering advances, and the need to protect national security and corporate IP. We also propose that this might be accomplished by asking the National Academies to **recommend** academic, corporate, and government scientific leaders to serve on an international scientific advisory board, and for the corresponding organizations in other countries to do the same. Access to the free flow of information promotes new knowledge and innovation. A return to a more restrictive intellectual environment is not only harmful to progress, but also nearly impossible to manage in the current internet age. A good place to start would be to engage the newly appointed head of the White House Office of Science and Technology Policy (the Science Advisor to the President of the United States), and working groups within established organizations. These organizations include the American Association for the Advancement of Science (AAAS) or the National Academies of Science, Engineering and Medicine, and corresponding international organizations. What incentive is there for a busy and successful scientist to serve in such capacity? It is the same altruism that motivates us to accept assignments as journal editors, manuscript reviewers, or funding agency panelists for the advancement of science toward the greater good.

#### Solves every existential threat.

Haynes 18—research associate in the Neurobiology Department at Harvard Medical School (Trevor, “Science Diplomacy: Collaboration in a rapidly changing world,” <http://sitn.hms.harvard.edu/flash/2018/science-diplomacy-collaboration-rapidly-changing-world/>, dml) // Re-Cut Justin

Today’s world is extremely interconnected. Most of us take this fact for granted, but its implications cannot be overstated. The rate at which information, resources, and people are able to move from one part of the world to another continues to accelerate at an alarming rate. Undoubtedly, this development has done society immense good. In the last century, global life expectancy has doubled, the percentage of people living in extreme poverty has dropped by about 60%, and world literacy rates have increased by a similar margin. But while these statistics paint a promising picture of human civilization, human progress rests on a fragile foundation of international cooperation; the challenges presented by an interconnected world are immense. War, natural disasters, and economic collapse now exert their effects globally, creating economic and ecological disasters and mass human migrations on an unprecedented scale. And with the US pulling out of major multilateral agreements on trade, climate change mitigation, and denuclearization, you might wonder if our ability to collaborate across borders productively is really up to the task.

Global challenges require global solutions, and global solutions require collaboration between countries both big and small, rich and poor, authoritative and democratic. There are few human enterprises capable of providing continuity across these differences, and as technological solutions are becoming available to some of our most pressing issues, two in particular will be necessary to getting the job done: science and diplomacy. While science has long been utilized as a means to reach political ends—think of British explorer James Cook’s mapping of unexplored continents or the United States’ Manhattan Project—a more formal integration of scientists into the diplomatic process is being undertaken. This effort, which has led to scientists and academics playing a direct role in foreign policy development and international relations, has given birth of a new branch of diplomacy: science diplomacy.

What is science diplomacy?

As both the term and concept of science diplomacy have only recently gained traction in scientific and diplomatic circles, it’s been given a variety of definitions. But common to them all is the focus on applying scientific expertise to an international effort. The focus of these efforts is to solve international problems collaboratively while balancing economic prosperity, environmental protection, and societal wellbeing. The challenge of reaching this balance in the face of a booming global population cannot be understated, but this new branch of diplomacy is already at work and is producing results. International agreements such as the Paris Climate Agreement and the Iran Nuclear Deal are two famous examples, and science diplomacy is also establishing international collaboration in many other important arenas. While these lesser known efforts may not dominate the headlines, they are quietly tackling the global issues of today and preparing us for those of tomorrow.

Natural disasters don’t respect national boundaries (and neither does the aftermath)

In 2013, the number of refugees displaced by natural disasters—hurricanes, droughts, earthquakes—outnumbered those displaced by war. Current projections estimate as many as 1 billion people may be displaced by natural disasters by the year 2050. That would mean 1 in 9 people on the planet displaced and looking for a home. Compare this to the estimated 12 million refugees displaced by the war in Syria, and a frightening picture begins to form. As natural disasters continue to increase in both their frequency and intensity, solutions for mitigating the risk of total catastrophe will be underpinned by science, technology, and the ability of the international community to collaborate. Many organizations are starting to tackle these problems through the use of science diplomacy. The center for Integrated Research on Disaster Risk (IRDR) is composed of ten national committees—a network of government sponsored research institutions across the world in countries ranging the political and economic scale. These working groups have committed to improving disaster-risk-reduction science and technology while providing guidance to policy makers charged with implementing disaster prevention and mitigation strategies.

IRDR is governed by a committee comprising experienced scientists and natural disaster experts. Its members come from all over the world—the US, China, Uganda, Norway, Mexico, Venezuela, and more. The diversity of this organization starts at the top and is crucial to developing comprehensive risk-reduction strategies. Data and insights from countries with varying areas of expertise are being shared and built upon, facilitating more accurate natural disaster forecasting and better strategies for mitigating their destructive power. And by including representatives from countries of varying political and economic power in its leadership, IRDR ensures that its work will consider the needs of the global community at large, rather than just nations with considerable wealth and political standing.

The results of this type of international collaboration speak for themselves. Although humanity is grappling with more natural disasters than ever before, deaths related to these incidents continue to trend downward. Operating outside of the typical political framework that dominates foreign relations, IRDR provides a model for effective collaboration across the geopolitical spectrum in the face of a major global issue.

Explore or Exploit? Managing international spaces

Over the last few decades the polar ice cap that covers much of the Arctic Ocean has been shrinking. So much so, that during the warm season vast areas of previously solid ice have become open waters, creating opportunities for new trade routes and exposing the Arctic’s enormous reserves of oil and natural gas. Depending on your values, this will sound either like an opportunity for huge economic development of the region or the inevitable exploitation of one of the last untouched natural territories on the planet. And if you live there, like the half a million indigenous people who currently do, how this territory is managed will determine where you can live, how (and if) you can make a living, and what the health of the ecosystems that have supported Arctic life for millennia will look like.

Luckily, such a scenario was predicted decades ago. In 1987, Mikhail Gorbachev, then leader of the then Soviet Union, delivered a speech outlining his aspirations for the arctic to be explored rather than exploited—to radically reduce military presence, create a collaborative multinational research effort, cooperate on matters of environmental security, and open up the Northern Sea Route for trade. This speech laid the foundation for the Arctic Council (Figure 1), which is one of the most successful examples of science diplomacy at work. Composed of the eight Arctic nations, including geopolitical rivals US and Russia, and numerous groups of indigenous peoples, the Arctic Council was established to maintain Gorbachev’s vision for the region while giving the indigenous peoples a seat at the negotiating table. The council’s activities are conducted by six scientific and technology-based working groups who conduct research in the area and provide knowledge and recommendations to the council members. As a result of this research, and allowing scientists to take part in the negotiations, the Arctic council has enacted several legally binding agreements regarding the sustainable development and environmental protection of the Arctic Ocean. These agreements have facilitated cooperation on a number of important issues including search and rescue operations, prevention and containment of maritime oil pollution, and, most recently, enhanced data sharing and scientific research collaborations. Against a backdrop of rapidly deteriorating diplomatic relations, the US and Russia have co-chaired task forces that laid the foundation for these agreements, proving to the world that meaningful results can be achieved through the avenue of science diplomacy, regardless of geopolitics.

Science diplomacy going forward

The technical expertise that characterizes science diplomacy will continue to be in demand across many realms of foreign policy. For example, synthetic biology and gene-editing technology continue to factor into matters regarding agriculture and trade. Also, digital currencies, such as bitcoin, have changed the way economists and businesses are approaching markets. Finally, machine learning and artificial intelligence are being used by governments as a means for population control, giving rise to a new type of governance—digital authoritarianism.

While this expertise will be necessary for managing such issues, building international coalitions can’t be done through a purely scientific and technical lens. Convincing others to cooperate means providing them with a convincing argument to do so, and in terms they understand and find compelling. To achieve this, scientists must be trained to communicate their expertise in a way that moves stakeholders in policy discussions to act. This means appealing to motivations they have been largely taught to put to the side—whether they be political, economic, or emotional in nature—without obscuring the data and insights they have to offer.

For our leaders, policy makers, and diplomats to effectively understand issues underpinned by science and technology, experts in these fields must continue to be integrated into the mechanisms of governance. With scientists in the US running for elections in numbers like never before, we can expect this trend to continue. And in the face of a rising wave of nationalism across the world, it is crucial that we do everything we can to foster collaboration. The future of human civilization depends on it.

#### Science diplomacy is key to nuclear security and counter-terror operations.

Micah D. Lowenthal 11. Senior Board Director / Program Director at The National Academy of Sciences. "Science Diplomacy for Nuclear Security." The United States Institute of Peace. <https://www.usip.org/sites/default/files/SR_288.pdf>.

Areas for Future U.S.-Russia Science Diplomacy Recent progress in the U.S.-Russia relationship provides fertile ground for science diplomacy between the two nations, as do the areas where there has not been progress. As Assistant Secretary Gottemoeller noted, the U.S.-Russian Agreement for Cooperation in the Field of Peaceful Uses of Nuclear Energy, also known as the U.S.-Russia 123 Agreement, came into force on January 11, 2011. The agreement normalizes and expands cooperation in nuclear energy and enables cooperation on technology development for nuclear nonproliferation programs, nuclear forensics, and safeguards and monitoring programs. The 123 Agreement is only a legal framework authorizing such work, so it is now up to the parties to identify the substantive work to be done under the agreement and to take the steps necessary to make that joint work successful. Secretary Perry listed a set of technical issues the world will face as it moves toward a follow-on arms control treaty and lower numbers of nuclear weapons, or zero nuclear weapons. They range from cooperation on ballistic missile defense to verification of warheads and treaties. Secretary Perry called these technical challenges special challenges to CISAC and others in the technical community engaged in science diplomacy. His list, as well as issues highlighted by Dr. Garwin and others, are as follows: Safeguarding Nuclear Power and Contributing to Nonproliferation Regimes “When we are considering the export of nuclear reactors and fuel to third countries, we need to make sure that we arrive at a solution that will not contribute to proliferation.” —Nikolai N. Ponomarev-Stepnoy Nuclear power is inextricably linked to a risk of proliferation because of the materials and technologies involved. Some nuclear-fuel-cycle technologies and some nuclear materials are less attractive or less effective for nuclear-weapons applications, but some level of risk always remains. For this reason, a variety of policy measures and physical safeguards has been put in place, and numerous others are being analyzed and considered. International agreements and commitments to physical safeguards, technologies, efforts for detection of undeclared facilities, and export controls for sensitive technologies, all contribute to a healthy nuclear nonproliferation regime. Because of the technical complexities of nearly every aspect of the nuclear fuel cycle and its potential exploitation for proliferation, science diplomacy can continue to make substantial contributions on this topic. Verifying Nuclear Arms Reductions “These negotiations [over reductions in strategic and nonstrategic arsenals] will only be fruitful or productive if the parties are successful in establishing mutually acceptable verification mechanisms.” —Viktor I. Yesin “Establishing the verification measures in transparency tools . . . will help us ensure confidence as we move from step to step. This isn’t going to happen without a strong scientific and technology base, because we have to have confidence that we collectively, the big we, know what’s going on in this area.” —Under Secretary of Energy Thomas D’Agostino In the debate over advice and consent on the ratification of the New START, the U.S. Senate made clear that the next step for nuclear arms control must include nonstrategic (tactical) nuclear weapons in Russia. Assistant Secretary Gottemoeller noted that the United States and Russia are preparing for a dialogue on nonstrategic nuclear weapons, and she highlighted the role of NGOs in providing analysis and ideas for this dialogue, “providing much, very welcome food for thought for those of us working these matters inside the government.” Under Secretary D’Agostino noted that a prominent challenge among the many associated with including tactical nuclear weapons in an arms control or reduction treaty is verification. Verification is also perhaps the topic most susceptible to technical options. General Viktor I. Yesin, former chief of staff of the Strategic Rocket Forces in Russia, proposed a course of action for verification of reductions in tactical nuclear weapons: (1) declare the number of existing weapons, (2) categorize the weapons into an active stockpile (deployable) and an inactive reserve subject to elimination, (3) agree that inactive reserve weapons cannot be made active, and (4) separate the storage facilities for the two categories. If these conditions are met, there could be on-site inspections of storage sites of both categories of weapons. The goal of each on-site inspection would be to ensure that the number of warheads in each storage facility does not exceed what is declared. The number in each category sent to elimination is also verifiable based on the amount of nuclear material obtained from elimination. There are technical details in General Yesin’s ideas that would require further development and refinement, as lingering doubts about possible undeclared sites and shielded weapons, among other issues, would need to be addressed. The same is true for nearly any such proposal. Secretary Perry said that the verification of warheads, as distinct from missiles and deployments, is a great technological challenge. Joint exploration and development of technical options to enable proposals for verification of declarations and reductions is a valuable topic where science diplomacy has an essential role to play. Countering Nuclear Terrorism “Should we really wait for nuclear terrorism, compared to which 9/11 will appear an innocent joke?” —Evgeniy Avrorin “[T]he stocks [of highly enriched uranium (HEU) and plutonium] have grown. Terrorism has become a serious problem. But the sense of danger seems to be muted, except perhaps for some people here today.” —John Ahearne It has been noted that the knowledge of how to build a crude nuclear explosive is within the reach of many, and that the difficulty in acquiring the fissile material for the nuclear explosive is the main obstacle to nuclear terrorism. Little progress has been made on the Fissile Material Cutoff Treaty (FMCT), and even this measure would only stop future production of fissile material, not address nuclear material already in existence. In discussing disposition of HEU and plutonium, Ahearne expressed his view that the sheer quantity of HEU and plutonium in storage is a hazard. Some aspects of verification of an FMCT and declarations of existing stocks are difficult, but for those who share Dr. Ahearne’s concern about stocks, the challenges cannot be avoided. D’Agostino and Gottemoeller both highlighted additional joint activities, such as nuclear forensics, which could work to curb nuclear terrorism.

#### Nuclear terror causes extinction.

Nickolas Roth 17. Research associate at the Belfer Center’s Project on Managing the Atom at Harvard University and research fellow at the Center for International and Security Studies at the University of Maryland. Matthew Bunn, Professor of practice at the Harvard Kennedy School. “The effects of a single terrorist nuclear bomb.” Bulletin of the Atomic Scientists, <http://thebulletin.org/effects-single-terrorist-nuclear-bomb11150>.

The escalating threats between North Korea and the United States make it easy to forget the “nuclear nightmare,” as former US Secretary of Defense William J. Perry put it, that could result even from the use of just a single terrorist nuclear bomb in the heart of a major city. At the risk of repeating the vast literature on the tragedies of Hiroshima and Nagasaki—and the substantial literature surrounding nuclear tests and simulations since then—we attempt to spell out here the likely consequences of the explosion of a single terrorist nuclear bomb on a major city, and its subsequent ripple effects on the rest of the planet. Depending on where and when it was detonated, the blast, fire, initial radiation, and long-term radioactive fallout from such a bomb could leave the heart of a major city a smoldering radioactive ruin, killing tens or hundreds of thousands of people and wounding hundreds of thousands more. Vast areas would have to be evacuated and might be uninhabitable for years. Economic, political, and social aftershocks would ripple throughout the world. A single terrorist nuclear bomb would change history. The country attacked—and the world—would never be the same. The idea of terrorists accomplishing such a thing is, unfortunately, not out of the question; it is far easier to make a crude, unsafe, unreliable nuclear explosive that might fit in the back of a truck than it is to make a safe, reliable weapon of known yield that can be delivered by missile or combat aircraft. Numerous government studies have concluded that it is plausible that a sophisticated terrorist group could make a crude bomb if they got the needed nuclear material. And in the last quarter century, there have been some 20 seizures of stolen, weapons-usable nuclear material, and at least two terrorist groups have made significant efforts to acquire nuclear bombs. Terrorist use of an actual nuclear bomb is a low-probability event—but the immensity of the consequences means that even a small chance is enough to justify an intensive effort to reduce the risk. Fortunately, since the early 1990s, countries around the world have significantly reduced the danger—but it remains very real, and there is more to do to ensure this nightmare never becomes reality. Brighter than a thousand suns. Imagine a crude terrorist nuclear bomb—containing a chunk of highly enriched uranium just under the size of a regulation bowling ball, or a much smaller chunk of plutonium—suddenly detonating inside a delivery van parked in the heart of a major city. Such a terrorist bomb would release as much as 10 kilotons of explosive energy, or the equivalent of 10,000 tons of conventional explosives, a volume of explosives large enough to fill all the cars of a mile-long train. In a millionth of a second, all of that energy would be released inside that small ball of nuclear material, creating temperatures and pressures as high as those at the center of the sun. That furious energy would explode outward, releasing its energy in three main ways: a powerful blast wave; intense heat; and deadly radiation. The ball would expand almost instantly into a fireball the width of four football fields, incinerating essentially everything and everyone within. The heated fireball would rise, sucking in air from below and expanding above, creating the mushroom cloud that has become the symbol of the terror of the nuclear age. The ionized plasma in the fireball would create a localized electromagnetic pulse more powerful than lightning, shorting out communications and electronics nearby—though most would be destroyed by the bomb’s other effects in any case. (Estimates of heat, blast, and radiation effects in this article are drawn primarily from Alex Wellerstein’s “Nukemap,” which itself comes from declassified US government data, such as the 660-page government textbook The Effects of Nuclear Weapons.) At the instant of its detonation, the bomb would also release an intense burst of gamma and neutron radiation which would be lethal for nearly everyone directly exposed within about two-thirds of a mile from the center of the blast. (Those who happened to be shielded by being inside, or having buildings between them and the bomb, would be partly protected—in some cases, reducing their doses by ten times or more.) The nuclear flash from the heat of the fireball would radiate in both visible light and the infrared; it would be “brighter than a thousand suns,” in the words of the title of a book describing the development of nuclear weapons—adapting a phrase from the Hindu epic the Bhagavad-Gita. Anyone who looked directly at the blast would be blinded. The heat from the fireball would ignite fires and horribly burn everyone exposed outside at distances of nearly a mile away. (In the Nagasaki Atomic Bomb Museum, visitors gaze in horror at the bones of a human hand embedded in glass melted by the bomb.) No one has burned a city on that scale in the decades since World War II, so it is difficult to predict the full extent of the fire damage that would occur from the explosion of a nuclear bomb in one of today’s cities. Modern glass, steel, and concrete buildings would presumably be less flammable than the wood-and-rice-paper housing of Hiroshima or Nagasaki in the 1940s—but many questions remain, including exactly how thousands of broken gas lines might contribute to fire damage (as they did in Dresden during World War II). On 9/11, the buildings of the World Trade Center proved to be much more vulnerable to fire damage than had been expected. Ultimately, even a crude terrorist nuclear bomb would carry the possibility that the countless fires touched off by the explosion would coalesce into a devastating firestorm, as occurred at Hiroshima. In a firestorm, the rising column of hot air from the massive fire sucks in the air from all around, creating hurricane-force winds; everything flammable and everything alive within the firestorm would be consumed. The fires and the dust from the blast would make it extremely difficult for either rescuers or survivors to see. The explosion would create a powerful blast wave rushing out in every direction. For more than a quarter-mile all around the blast, the pulse of pressure would be over 20 pounds per square inch above atmospheric pressure (known as “overpressure”), destroying or severely damaging even sturdy buildings. The combination of blast, heat, and radiation would kill virtually everyone in this zone. The blast would be accompanied by winds of many hundreds of miles per hour. The damage from the explosion would extend far beyond this inner zone of almost total death. Out to more than half a mile, the blast would be strong enough to collapse most residential buildings and create a serious danger that office buildings would topple over, killing those inside and those in the path of the rubble. (On the other hand, the office towers of a modern city would tend to block the blast wave in some areas, providing partial protection from the blast, as well as from the heat and radiation.) In that zone, almost anything made of wood would be destroyed: Roofs would cave in, windows would shatter, gas lines would rupture. Telephone poles, street lamps, and utility lines would be severely damaged. Many roads would be blocked by mountains of wreckage. In this zone, many people would be killed or injured in building collapses, or trapped under the rubble; many more would be burned, blinded, or injured by flying debris. In many cases, their charred skin would become ragged and fall off in sheets. The effects of the detonation would act in deadly synergy. The smashed materials of buildings broken by the blast would be far easier for the fires to ignite than intact structures. The effects of radiation would make it far more difficult for burned and injured people to recover. The combination of burns, radiation, and physical injuries would cause far more death and suffering than any one of them would alone. The silent killer. The bomb’s immediate effects would be followed by a slow, lingering killer: radioactive fallout. A bomb detonated at ground level would dig a huge crater, hurling tons of earth and debris thousands of feet into the sky. Sucked into the rising fireball, these particles would mix with the radioactive remainders of the bomb, and over the next few hours or days, the debris would rain down for miles downwind. Depending on weather and wind patterns, the fallout could actually be deadlier and make a far larger area unusable than the blast itself. Acute radiation sickness from the initial radiation pulse and the fallout would likely affect tens of thousands of people. Depending on the dose, they might suffer from vomiting, watery diarrhea, fever, sores, loss of hair, and bone marrow depletion. Some would survive; some would die within days; some would take months to die. Cancer rates among the survivors would rise. Women would be more vulnerable than men—children and infants especially so. Much of the radiation from a nuclear blast is short-lived; radiation levels even a few days after the blast would be far below those in the first hours. For those not killed or terribly wounded by the initial explosion, the best advice would be to take shelter in a basement for at least several days. But many would be too terrified to stay. Thousands of panic-stricken people might receive deadly doses of radiation as they fled from their homes. Some of the radiation will be longer-lived; areas most severely affected would have to be abandoned for many years after the attack. The combination of radioactive fallout and the devastation of nearly all life-sustaining infrastructure over a vast area would mean that hundreds of thousands of people would have to evacuate. Ambulances to nowhere. The explosion would also destroy much of the city’s ability to respond. Hospitals would be leveled, doctors and nurses killed and wounded, ambulances destroyed. (In Hiroshima, 42 of 45 hospitals were destroyed or severely damaged, and 270 of 300 doctors were killed.) Resources that survived outside the zone of destruction would be utterly overwhelmed. Hospitals have no ability to cope with tens or hundreds of thousands of terribly burned and injured people all at once; the United States, for example, has 1,760 burn beds in hospitals nationwide, of which a third are available on any given day. And the problem would not be limited to hospitals; firefighters, for example, would have little ability to cope with thousands of fires raging out of control at once. Fire stations and equipment would be destroyed in the affected area, and firemen killed, along with police and other emergency responders. Some of the first responders may become casualties themselves, from radioactive fallout, fire, and collapsing buildings. Over much of the affected area, communications would be destroyed, by both the physical effects and the electromagnetic pulse from the explosion. Better preparation for such a disaster could save thousands of lives—but ultimately, there is no way any city can genuinely be prepared for a catastrophe on such a historic scale, occurring in a flash, with zero warning. Rescue and recovery attempts would be impeded by the destruction of most of the needed personnel and equipment, and by fire, debris, radiation, fear, lack of communications, and the immense scale of the disaster. The US military and the national guard could provide critically important capabilities—but federal plans assume that “no significant federal response” would be available for 24-to-72 hours. Many of those burned and injured would wait in vain for help, food, or water, perhaps for days. The scale of death and suffering. How many would die in such an event, and how many would be terribly wounded, would depend on where and when the bomb was detonated, what the weather conditions were at the time, how successful the response was in helping the wounded survivors, and more. Many estimates of casualties are based on census data, which reflect where people sleep at night; if the attack occurred in the middle of a workday, the numbers of people crowded into the office towers at the heart of many modern cities would be far higher. The daytime population of Manhattan, for example, is roughly twice its nighttime population; in Midtown on a typical workday, there are an estimated 980,000 people per square mile. A 10-kiloton weapon detonated there might well kill half a million people—not counting those who might die of radiation sickness from the fallout. (These effects were analyzed in great detail in the Rand Corporation’s Considering the Effects of a Catastrophic Terrorist Attack and the British Medical Journal’s “Nuclear terrorism.”) On a typical day, the wind would blow the fallout north, seriously contaminating virtually all of Manhattan above Gramercy Park; people living as far away as Stamford, Connecticut would likely have to evacuate. Seriously injured survivors would greatly outnumber the dead, their suffering magnified by the complete inadequacy of available help. The psychological and social effects—overwhelming sadness, depression, post-traumatic stress disorder, myriad forms of anxiety—would be profound and long-lasting. The scenario we have been describing is a groundburst. An airburst—such as might occur, for example, if terrorists put their bomb in a small aircraft they had purchased or rented—would extend the blast and fire effects over a wider area, killing and injuring even larger numbers of people immediately. But an airburst would not have the same lingering effects from fallout as a groundburst, because the rock and dirt would not be sucked up into the fireball and contaminated. The 10-kiloton blast we have been discussing is likely toward the high end of what terrorists could plausibly achieve with a crude, improvised bomb, but even a 1-kiloton blast would be a catastrophic event, having a deadly radius between one-third and one-half that of a 10-kiloton blast. These hundreds of thousands of people would not be mere statistics, but countless individual stories of loss—parents, children, entire families; all religions; rich and poor alike—killed or horribly mutilated. Human suffering and tragedy on this scale does not have to be imagined; it can be remembered through the stories of the survivors of the US atomic bombings of Hiroshima and Nagasaki, the only times in history when nuclear weapons have been used intentionally against human beings. The pain and suffering caused by those bombings are almost beyond human comprehension; the eloquent testimony of the Hibakusha—the survivors who passed through the atomic fire—should stand as an eternal reminder of the need to prevent nuclear weapons from ever being used in anger again. Global economic disaster. The economic impact of such an attack would be enormous. The effects would reverberate for so far and so long that they are difficult to estimate in all their complexity. Hundreds of thousands of people would be too injured or sick to work for weeks or months. Hundreds of thousands more would evacuate to locations far from their jobs. Many places of employment would have to be abandoned because of the radioactive fallout. Insurance companies would reel under the losses; but at the same time, many insurance policies exclude the effects of nuclear attacks—an item insurers considered beyond their ability to cover—so the owners of thousands of buildings would not have the insurance payments needed to cover the cost of fixing them, thousands of companies would go bankrupt, and banks would be left holding an immense number of mortgages that would never be repaid. Consumer and investor confidence would likely be dramatically affected, as worried people slowed their spending. Enormous new homeland security and military investments would be very likely. If the bomb had come in a shipping container, the targeted country—and possibly others—might stop all containers from entering until it could devise a system for ensuring they could never again be used for such a purpose, throwing a wrench into the gears of global trade for an extended period. (And this might well occur even if a shipping container had not been the means of delivery.) Even the far smaller 9/11 attacks are estimated to have caused economic aftershocks costing almost $1 trillion even excluding the multi-trillion-dollar costs of the wars that ensued. The cost of a terrorist nuclear attack in a major city would likely be many times higher. The most severe effects would be local, but the effects of trade disruptions, reduced economic activity, and more would reverberate around the world. Consequently, while some countries may feel that nuclear terrorism is only a concern for the countries most likely to be targeted—such as the United States—in reality it is a threat to everyone, everywhere. In 2005, then-UN Secretary-General Kofi Annan warned that these global effects would push “tens of millions of people into dire poverty,” creating “a second death toll throughout the developing world.” One recent estimate suggested that a nuclear attack in an urban area would cause a global recession, cutting global Gross Domestic Product by some two percent, and pushing an additional 30 million people in the developing world into extreme poverty. Desperate dilemmas. In short, an act of nuclear terrorism could rip the heart out of a major city, and cause ripple effects throughout the world. The government of the country attacked would face desperate decisions: How to help the city attacked? How to prevent further attacks? How to respond or retaliate? Terrorists—either those who committed the attack or others—would probably claim they had more bombs already hidden in other cities (whether they did or not), and threaten to detonate them unless their demands were met. The fear that this might be true could lead people to flee major cities in a large-scale, uncontrolled evacuation. There is very little ability to support the population of major cities in the surrounding countryside. The potential for widespread havoc and economic chaos is very real. If the detonation took place in the capital of the nation attacked, much of the government might be destroyed. A bomb in Washington, D.C., for example, might kill the President, the Vice President, and many of the members of Congress and the Supreme Court. (Having some plausible national leader survive is a key reason why one cabinet member is always elsewhere on the night of the State of the Union address.) Elaborate, classified plans for “continuity of government” have already been drawn up in a number of countries, but the potential for chaos and confusion—if almost all of a country’s top leaders were killed—would still be enormous. Who, for example, could address the public on what the government would do, and what the public should do, to respond? Could anyone honestly assure the public there would be no further attacks? If they did, who would believe them? In the United States, given the practical impossibility of passing major legislation with Congress in ruins and most of its members dead or seriously injured, some have argued for passing legislation in advance giving the government emergency powers to act—and creating procedures, for example, for legitimately replacing most of the House of Representatives. But to date, no such legislative preparations have been made. In what would inevitably be a desperate effort to prevent further attacks, traditional standards of civil liberties might be jettisoned, at least for a time—particularly when people realized that the fuel for the bomb that had done such damage would easily have fit in a suitcase. Old rules limiting search and surveillance could be among the first to go. The government might well impose martial law as it sought to control the situation, hunt for the perpetrators, and find any additional weapons or nuclear materials they might have. Even the far smaller attacks of 9/11 saw the US government authorizing torture of prisoners and mass electronic surveillance. And what standards of international order and law would still hold sway? The country attacked might well lash out militarily at whatever countries it thought might bear a portion of responsibility. (A terrifying description of the kinds of discussions that might occur appeared in Brian Jenkins’ book, Will Terrorists Go Nuclear?) With the nuclear threshold already crossed in this scenario—at least by terrorists—it is conceivable that some of the resulting conflicts might escalate to nuclear use. International politics could become more brutish and violent, with powerful states taking unilateral action, by force if necessary, in an effort to ensure their security. After 9/11, the United States led the invasions of two sovereign nations, in wars that have since cost hundreds of thousands of lives and trillions of dollars, while plunging a region into chaos. Would the reaction after a far more devastating nuclear attack be any less?

#### Reject 1AR theory- A] 7-6 time skew means it’s endlessly aff biased B] I don’t have a 3nr which allows for endless extrapolation C] 1AR theory is skewed to the aff because they have a 2ar judge psychology warrant which is also a reason why they shouldn’t get 2ar weighing

#### Infinite abuse claims are wrong- A] Spikes solve-you can just preempt paradigms in the 1AC B] Functional limits- 1nc is only 7 minutes long

#### Reasonability on 1AR shells – 1AR theory is very aff-biased because the 2AR gets to line-by-line every 2NR standard with new answers that never get responded to– reasonability checks 2AR sandbagging by preventing really abusive 1NCs while still giving the 2N a chance.

#### DTA on 1AR shells - They can blow up a blippy 20 second shell to 3 min of the 2AR while I have to split my time and can’t preempt 2AR spin which necessitates judge intervention and means 1AR theory is irresolvable so you shouldn’t stake the round on it.

#### No new 1ar theory paradigm issues- A] the 1NC has already occurred with current paradigm issues in mind so new 1ar paradigms moot any theoretical offense B] introducing them in the aff allows for them to be more rigorously tested which o/w’s on time frame since we can set higher quality norms. C] They get new 2ar responses that I cant contest which means they can just lbl all of my args and read their own new weighing args which should be a reason they don’t get 2ar weighing

### 1NC – OFF

#### Counterplan text: during pandemics The member nations of the WTO should impose a mandatory lockdown until there is no more than one new case per day per 100,000 people after which local officials will modulate lockdown levels based on local case numbers. Governments should compensate both individual workers and small businesses that suffer substantial or irreparable economic loss as a result of lockdowns.

#### Only the lockdown solves- it curbs Disease spread until the vaccine

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[Michael T. and Mark Olshaker, writer and documentary filmmaker, "America Needs to Lock Down Again," Foreign Affairs, 9-16-20, https://www.foreignaffairs.com/articles/united-states/2020-09-16/coronavirus-america-needs-lock-down-again, accessed 10-29-20]

In our essay “Chronicle of a Pandemic Foretold,” for the July/August issue of Foreign Affairs, we described the struggle against COVID-19 in terms of a baseball game and estimated that the United States was in about the third inning of a nine-inning contest. At this point, however, it may be more helpful to shift to an altogether different analogy. The unfolding story of the pandemic is a three-act play, in which the country is now midway through the second act.

The first act saw the disease spread from China to the rest of the world and to a woefully unprepared United States. The second witnessed Americans tire of restrictions and effectively surrender to the pandemic. Infection rates across the country soared during the summer and will likely rise again in the autumn as schools and universities reopen. To truly get the novel coronavirus under control, the United States must do what it has not done so far: impose real and stringent lockdowns across the country for roughly two months. Controlling the spread of the disease in this way will save lives ahead of the eventual end of this drama in the pandemic’s final act—the arrival of a safe, effective vaccine.

THE CURTAIN RISES

Act I opened in late 2019 with the emergence in China of a novel coronavirus that spread throughout much of the world with breathtaking speed and effect. Nations and regions faced the challenge in different ways and with varying levels of success. After a horrendous start, for example, Italy managed to get transmission substantially under control by imposing a near-complete shutdown of the northern part of the country. In the United States, both New York City and New York State saw catastrophic levels of infection that overwhelmed the entire health-care system. It is difficult to forget the images of refrigerated trailers sitting outside hospital emergency rooms to accommodate the dead. But under the leadership of Governor Andrew Cuomo—and thanks to a coordinated state public health response—New York locked down to get the number of cases to a manageable level and then maintain the low numbers, turning a disaster into a model for the rest of the United States.

The issue of testing loomed over Act I. Some Asian nations that had experience with SARS began widespread testing of possible cases early and therefore were able to do contact tracing and largely control viral transmission. The United States did not do that. The White House denied the potential seriousness of the coronavirus (allegedly in a bid to prevent “panic”), while the Centers for Disease Control and Prevention (CDC) developed a test for national use that was faulty, leaving the virus difficult to track and making case isolation and contact tracing ineffective as a means to control transmission. That forced the country onto a much more disruptive path: an attempt to control and mitigate the virus’s effects through a national lockdown of all nonessential personnel.

The price was steep, with millions of jobs lost, schools closed, and all public events and gatherings officially canceled. In mid-April, the United States was seeing 32,000 new cases a day. But a month later, that figure had dropped to 22,000 and Americans felt they had turned a corner, that the pandemic was subsiding and the battle was won.

THE DISTANT PEAK

Act II of this drama began around Memorial Day weekend in late May. Pandemic fatigue had set in. Americans seemed to collectively declare, “We’re done,” taking any decrease in daily case counts or deaths as a sign that the virus had been curtailed. The warm-weather months drew people into social settings, and the White House and a host of pundits encouraged this natural yearning to get back to business—and leisure—as usual. The administration and its allies posited a zero-sum choice between continuing to slow transmission of the disease and saving the economy. In fact, the country had the fire only under limited control, and if you stop fighting a fire at that point, it will naturally flare up again and continue to burn.

By July 20, with people resuming socializing in large groups, the country’s daily new case count shot up to more than 66,000. It should be noted that the many protests that followed the death of George Floyd in late May did not contribute much to the spread since the demonstrations occurred outdoors, where the virus rapidly dissipates in the air. The spring weekend beach gatherings of young people, by contrast, led to more serious transmissions because revelers often ended up indoors, particularly in close and crowded confines such as bars and houses.

The rate of daily new cases dipped to a little over 42,000 by the end of August, largely because of major containment efforts in California, Florida, Georgia, and Texas. As encouraging as that was on the face of it, the United States was still seeing about 1,000 COVID-19-related deaths per day, hardly a victory by any standard. Americans can expect these crests and troughs in new infections to continue, with each successive peak higher than the one before, until either an effective vaccine becomes widely available or herd immunity is established in the population through person-to-person transmission.

Herd immunity is often discussed but widely misunderstood. Each infectious disease has a different threshold for what percentage of a given population must be immune before the rate of transmission begins to drop. For a highly infectious agent transmitted through the air, such as measles, that percentage can be as high as 95 percent. For COVID-19, most public health infectious disease experts estimate it to be between 50 and 70 percent. One theory holds that the best way to approach the virus is to try to achieve herd immunity as quickly as possible through natural infection so everything can get back to normal, while protecting the older and most vulnerable people. This is the method seemingly employed by Sweden. Its transmission and mortality rates were significantly higher than those of neighboring Denmark and Norway, but the country does not appear to be substantially closer to reaching herd immunity than its Scandinavian neighbors, all of which are still far short of the threshold. Moreover, there is emerging evidence that exposure to the virus may confer only temporary immunity, possibly as brief as several months. And achieving herd immunity—if that is even possible—would only slow transmission, not halt it.

By the most liberal estimates, only about ten to 12 percent of the U.S. population has been infected thus far and, as Sweden’s experience has shown, reaching the threshold will be a long-drawn-out process that could result in the deaths of more than two million Americans. As it is, with about four percent of the world’s population, the United States has racked up about a quarter of all confirmed COVID-19 fatalities. The country failed to protect vulnerable populations, as witnessed in the many outbreaks in nursing homes and extended-care facilities. The virus has also taken a toll on young and healthy individuals; even some with mild or asymptomatic variants of the disease have become “long haulers,” who experience a range of symptoms, including chronic fatigue and cardiac and respiratory issues, weeks or months after getting infected.

SHUT IT DOWN

Herd immunity is a distant and unrealistic prospect, but Americans still have the opportunity to mitigate the suffering and death caused by the disease. The reality is that the only way for the United States to get through Act II with low levels of morbidity and mortality is through more complete lockdowns than were previously implemented in areas with high incidence of infection. Currently, the upper Midwest is the “hottest” area in the country for community-wide transmission, but other areas will see increasing case totals deeper into the fall. The aim at this point, quite simply, should be to cut transmission of the virus as much as possible until the creation and distribution of an effective vaccine.

Such lockdowns should last six to eight weeks with a goal of reaching no more than one new case per day per 100,000 people. This low rate is necessary for testing and contact tracing to have any meaningful effect. Once that rate is achieved, however, local officials will be able to adjust lockdown measures more accurately and with the flexibility the pandemic demands. If the White House and federal government will not lead, which is unfortunately likely under the current administration, the governors of each state, in coordination with their neighboring states, must take the initiative themselves. Some might think this is unrealistic, but New York has been able to maintain this low rate of new infections for the past three months.

Stringent lockdowns, of course, would depend on the continued labor of essential workers, a category we estimate to be no more than 35 percent of the workforce and possibly less. What about other workers? As part of its broader anti-COVID-19 strategy, the federal and state governments should compensate both individual workers and small businesses that suffer substantial or irreparable economic loss as a result of lockdowns. Such support negates the false choice between public and economic health. If carried out successfully, the near-complete shutdowns would be not open-ended but limited in time. And the government has the means to prop up adversely affected workers and businesses. As Minneapolis Federal Reserve Bank President Neel Kashkari outlined in an op-ed in The New York Times cowritten with one of us (Osterholm), this fiscal obligation could be covered by the money most Americans who have not lost income are saving by not spending as much during the pandemic—the personal savings rate of Americans has grown from eight percent in January to 20 percent in August. Domestic savings can fund investment in the national economy, a concept that should work equally well in other developed nations. Banks, whose holdings have been boosted by the additional savings, could loan the money necessary for protecting jobs and businesses; Americans would essentially be repaying themselves rather than taking the more traditional route of incurring foreign debt. We believe many people would support a more robust lockdown if they understood that they would not suffer financially. Such a subsidy will actually save money in the long term by preserving jobs and small businesses.

The alternatives to serious lockdowns are insufficient. In areas where the disease is still rampant, masks and physical distancing alone will not get the job done. Business as usual for another six to eight months—until an effective vaccine is widely available—will send current rates of transmission even higher, especially as schools and colleges reopen. By the middle of September, some universities had already canceled in-person classes owing to widespread transmission on campus. Consider how much pain, suffering, and death Americans have endured so far, with no more than ten to 12 percent of the population infected. The next phase could be overwhelming and make Americans look back with nostalgia at the time when new infection rates were still under 100,000 per day.

A DIFFICULT DENOUEMENT

The final act will begin when—and if—one vaccine or more becomes broadly available. A vaccine will eventually bring this long drama to an end, but it will raise a whole new set of questions. Will enough Americans be willing to take it, given our national schizophrenic view of vaccines and science in general? How effective will a vaccine be, and how long will it confer immunity? What will the rules be for approving the vaccine, in the United States and the rest of the world? Who should, or will, get it first? There has been little official or public discussion about answers to these important questions.

It would be dangerous if a possible vaccine became politicized, either to achieve power, prestige, and influence for the country that produces it or to gain partisan advantage within the United States. Many in the public health sphere are afraid that a vaccine will be made available for use before it has been demonstrated to be safe and effective. Never before has the authority and confidence in U.S. government scientific institutions been so undermined by real or perceived political pressure from the White House. At the beginning of September, the CDC directed localities to prepare for the distribution of a vaccine in two months, at the beginning of November, right around the time of the presidential election. One possible mechanism for this expedited rollout would require the president to direct the Food and Drug Administration or the secretary of the Department of Health and Human Services to grant Emergency Use Authorization for a vaccine candidate that looks promising but has not been through the entire validating process.

There is indeed an inescapable tension between wanting a vaccine as soon as possible to prevent further transmission of the disease (and the resulting illnesses and deaths) and taking the necessary time to produce a safe vaccine, whose efficacy and effects on people of various ages and health situations are well understood. But public health and political officials should be extremely wary of any attempt to grant Emergency Use Authorization to a vaccine that hasn’t completed phase three trials, the final and most rigorous stage in which the product is tested over a broad range of thousands of subjects. In most instances in which such authorization is granted, it is for extremely sick or even dying patients. In this case, it would be granted to administer a vaccine to healthy people before the formula is perfected and before any potential negative effects have been documented. In 1955, one company’s production of the original Salk polio vaccine turned out to be defective, causing 40,000 cases of polio. Ten children died. In 1976, a rush to produce a vaccine against a perceived threat of swine flu left approximately 450 recipients with Guillain-Barré Syndrome paralysis.

One of the key reasons for a full phase three review, which includes at least 30,000 test subjects in a double-blind administration (meaning neither the subject nor the administrator knows who has been given the vaccine and who has been given a placebo), is to determine the vaccine’s impact and effects, positive and negative, on a range of different risk groups. What might be safe and effective for young adults, for example, might be ineffective or even harmful for seniors or those with certain underlying conditions. It is also possible that the effect on children could be different or unpredictable. These results will probably take months to sort out. Even more troubling, present plans do not call for either children or the elderly to be included in the phase three test group. Moreover, the first vaccines for this virus probably won’t be home runs (to go back to baseball analogies for a moment) like the smallpox, polio, and measles vaccines. They are more likely to be singles and doubles like the annual influenza vaccine, which in a good year is about 50 percent effective. Americans won’t be going back to the “old normal” anytime soon.

The best outcome in Act III will be the development and distribution of the vaccine as quickly and widely as possible, without shortcuts on safety or testing for effectiveness. The U.S. government should establish and publicize the criteria by which a vaccine will be considered ready for wide-scale public use as well as make clear which groups of people will receive the vaccine first. A proven safe and effective vaccine should first be given to physicians, hospital personnel, and first responders; then to essential workers with underlying risks for serious disease; and after that, to children so that they can stay in school.

But right now, the United States should just be trying to get through the rest of Act II—the coronavirus winter—and hold out until the arrival of a vaccine-enabled spring. It must impose severe lockdowns to truly curb the spread of the disease. New York has shown it can be done. It remains to be seen whether the rest of the country possesses the collective grit and determination to follow suit. A happy ending to this drama will very much be determined by how Americans decide to craft the rest of this current act.

### 1NC – OFF

#### 1] Prep – small school debaters only need a few good generics like innovation, the biotech da, and the consult who cp counterplan to win every util round. But under kant, since contentions are less variable and analytics are more important, big-school block-writing hoses them every round. Blocks don’t matter nearly as much for util since innovation checks coaching bias.

#### 2] Innovation – there are simply more articles written in the context of util than in agonism – simple Google search proves. Proves util incentivizes a wider variety of arguments than kant, which causes recycling of old args – proven by the fact that the same agonism justifications have been read every phil round for decades. Think about it – new advantages are broken often, but phil contentions are established at the beginning of the topic and never change for two months.

#### 3] Ground – non-util philosophies conclude overwhelmingly on one side of most topics – for example, Kant won every neg round on the national service topic. Only util generates robust debates with equitable ground.

#### 4] Real-world – abstract debates about philosophy have much less grounding in the real world than util – discussing consequences gives students education about fopo, economics, IR, etc. Outweighs since portable skills are the ultimate goal of debate.

#### Theoretical justifications outweigh – 1] Frameworks are essentially T debates about the word ought which proves the better model of debate is what matters. 2] Turns substance – it doesn’t matter how true a philosophy is if it can’t be engaged or is impossible to learn from – even if Kant was correct, we shouldn’t use his philosophy in debate specifically. 3] Exclusionary rule – we’ve won Agonism is unfair which means all their substantive arguments should be presumed false – the only reason they seem true is because it was impossible to engage in the first place.

#### Presumption and permissibility negate-

#### A. We assume statements to be false – if I said there’s an invisible unicorn next to me you would need proof. If we assume statements to be true then assume the NC to be true as well.

#### B. Negating is harder so if all else is equal I’ve done the better debating.

#### C. Skep and phil NCs with triggers are core neg generics – the aff already has infinite prep, they don’t need more phil.

#### D. Ought implies a moral obligation which proves the aff has to win the resolution is a positive good.

#### No calc indicts – a) no philosophy actually says that consequences don’t matter at all since otherwise it would indict every theory since they use causal events to understand how their ethics have worked in the past and through the justification of premises b) we don’t need consequences – winning hedonism proves we’re the only one with impacts to it which means risk of offense framing is sufficient c) they’re blippy nibs that set the aff at an unfair advantage since they only have to win one while we have to beat them all – voting issue for fairness

### 1NC – OFF

#### Climate Patents and Innovation high now and solving Warming but waiving patents sets a dangerous precedent for appropriations – the mere threat is sufficient is enough to kill investment.

Brand 5-26, Melissa. “Trips Ip Waiver Could Establish Dangerous Precedent for Climate Change and Other Biotech Sectors.” IPWatchdog.com | Patents & Patent Law, 26 May 2021, www.ipwatchdog.com/2021/05/26/trips-ip-waiver-establish-dangerous-precedent-climate-change-biotech-sectors/id=133964/. //sid

The biotech industry is making remarkable advancestowards climate change solutions, and it is precisely for this reason that it can expect to be in the crosshairs of potential IP waiver discussions. President Biden is correct to refer to climate change as an existential crisis. Yet it does not take too much effort to connect the dots between President Biden’s focus on climate change and his Administration’s recent commitment to waive global IP rights for Covid vaccines (TRIPS IP Waiver). “This is a global health crisis, and the extraordinary circumstances of the COVID-19 pandemic call for extraordinary measures.” If an IP waiver is purportedly necessary to solve the COVID-19 global health crisis (and of course [we dispute this notion](https://www.ipwatchdog.com/2021/04/19/waiving-ip-rights-during-times-of-covid-a-false-good-idea/id=132399/)), can we really feel confident that this or some future Administration will not apply the same logic to the climate crisis? And, without the confidence in the underlying IP for such solutions, what does this mean for U.S. innovation and economic growth? United States Trade Representative (USTR) [Katherine Tai](https://www.ipwatchdog.com/2021/05/05/tai-says-united-states-will-back-india-southafrica-proposal-waive-ip-rights-trips/id=133224/) was subject to questioning along this very line during a recent Senate Finance Committee hearing. And while Ambassador Tai did not affirmatively state that an IP waiver would be in the future for climate change technology, she surely did not assuage the concerns of interested parties. The United States has historically supported robust IP protection. This support is one reason the United States is the center of biotechnology innovation and leading the fight against COVID-19. However, a brief review of the domestic legislation arguably most relevant to this discussion shows just how far the international campaign against IP rights has eroded our normative position. The Clean Air Act, for example, contains a provision allowing for the mandatory licensing of patents covering certain devices for reducing air pollution. Importantly, however, the patent owner is accorded due process and the statute lays out a detailed process regulating the manner in which any such license can be issued, including findings of necessity and that no reasonable alternative method to accomplish the legislated goal exists. Also of critical importance is that the statute requires compensation to the patent holder. Similarly, the Atomic Energy Act contemplates mandatory licensing of patents covering inventions of primary importance in producing or utilizing atomic energy. This statute, too, requires due process, findings of importance to the statutory goals and compensation to the rights holder. A TRIPS IP waiver would operate outside of these types of frameworks. There would be no due process, no particularized findings, no compensationand no recourse. Indeed, the fact that the World Trade Organization (WTO) already has a process under the TRIPS agreement to address public health crises, including the compulsory licensing provisions, with necessary guardrails and compensation, makes quite clear that the waiver would operate as a free for all. Forced Tech Transfer Could Be on The Table When being questioned about the scope of a potential TRIPS IP waiver, Ambassador Tai invoked the proverb “Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime.” While this answer suggests primarily that, in times of famine, the Administration would rather give away other people’s fishing rods than share its own plentiful supply of fish (here: actual COVID-19 vaccine stocks), it is apparent that in Ambassador Tai’s view waiving patent rights alone would not help lower- and middle-income countries produce their own vaccines. Rather, they would need to be taught how to make the vaccines and given the biotech industry’s manufacturing know-how, sensitive cell lines, and proprietary cell culture media in order to do so. In other words, Ambassador Tai acknowledged that the scope of the current TRIPS IP waiver discussions includes the concept of forced tech transfer. In the context of climate change, the idea would be that companies who develop successful methods for producing new seed technologies and sustainable biomass**,** reducing greenhouse gases in manufacturing and transportation, capturing and sequestering carbon in soil and products, and more, would be required to turn over their proprietaryknow-how to global competitors. While it is unclear how this concept would work in practice and under the constitutions of certain countries, the suggestion alone could be devastating to voluntary internationalcollaborations. Even if one could assume that the United States could not implement forced tech transfer on its own soil, what about the governments of our international development partners? It is not hard to understand that a U.S.-based company developing climate change technologies would be unenthusiastic about partnering with a company abroad knowing that the foreign country’s government is on track – with the assent of the U.S. government – to change its laws and seize proprietary materials and know-how that had been voluntarily transferred to the local company. Necessary Investment Could Diminish Developing climate change solutions is not an easy endeavor and bad policy positions threaten the likelihood that they will materialize. These products have long lead times from research and development to market introduction, owing not only to a high rate of failure but also rigorous regulatory oversight. Significant investment is required to sustain and drive these challenging and long-enduring endeavors. For example, synthetic biology companies critical to this area of innovation [raised over $1 billion in investment in the second quarter of 2019 alone](https://www.bio.org/sites/default/files/2021-04/Climate%20Report_FINAL.pdf). If investors cannot be confident that IP will be in place to protect important climate change technologies after their long road from bench to market, it is unlikely they will continue to investat the current and required levels**.**

#### Climate change destroys the world.

Specktor 19 [Brandon writes about the science of everyday life for Live Science, and previously for Reader's Digest magazine, where he served as an editor for five years] 6-4-2019, "Human Civilization Will Crumble by 2050 If We Don't Stop Climate Change Now, New Paper Claims," livescience, <https://www.livescience.com/65633-climate-change-dooms-humans-by-2050.html> Justin

The current climate crisis, they say, is larger and more complex than any humans have ever dealt with before. General climate models — like the one that the [United Nations' Panel on Climate Change](https://www.ipcc.ch/sr15/) (IPCC) used in 2018 to predict that a global temperature increase of 3.6 degrees Fahrenheit (2 degrees Celsius) could put hundreds of millions of people at risk — fail to account for the **sheer complexity of Earth's many interlinked geological processes**; as such, they fail to adequately predict the scale of the potential consequences. The truth, the authors wrote, is probably far worse than any models can fathom. How the world ends What might an accurate worst-case picture of the planet's climate-addled future actually look like, then? The authors provide one particularly grim scenario that begins with world governments "politely ignoring" the advice of scientists and the will of the public to decarbonize the economy (finding alternative energy sources), resulting in a global temperature increase 5.4 F (3 C) by the year 2050. At this point, the world's ice sheets vanish; brutal droughts kill many of the trees in the [Amazon rainforest](https://www.livescience.com/57266-amazon-river.html) (removing one of the world's largest carbon offsets); and the planet plunges into a feedback loop of ever-hotter, ever-deadlier conditions. "Thirty-five percent of the global land area, and **55 percent of the global population, are subject to more than 20 days a year of** [**lethal heat conditions**](https://www.livescience.com/55129-how-heat-waves-kill-so-quickly.html), beyond the threshold of human survivability," the authors hypothesized. Meanwhile, droughts, floods and wildfires regularly ravage the land. Nearly **one-third of the world's land surface turns to desert**. Entire **ecosystems collapse**, beginning with the **planet's coral reefs**, the **rainforest and the Arctic ice sheets.** The world's tropics are hit hardest by these new climate extremes, destroying the region's agriculture and turning more than 1 billion people into refugees. This mass movement of refugees — coupled with [shrinking coastlines](https://www.livescience.com/51990-sea-level-rise-unknowns.html) and severe drops in food and water availability — begin to **stress the fabric of the world's largest nations**, including the United States. Armed conflicts over resources, perhaps culminating in **nuclear war, are likely**. The result, according to the new paper, is "outright chaos" and perhaps "the end of human global civilization as we know it."

### 1NC – OFF

#### The Council for TRIPs should vote to [reduce intellectual property protections by implementing a one and done approach to patent protections] amending TRIPs to mandate the plan.

#### The United States should:

#### --Publicly rescind support for the reduction

#### -- Veto this motion and refuse to comply

#### The remaining member nations should initiate proceedings against the United States through the World Trade Organization, Dispute Settlement Body, which ought to find against the United States. The United States ought to comply with this ruling.

#### The counterplan has the United States oppose the plan but get overruled by the other nations. After the WTO DSB finds against them, they will comply---that solves the case but avoids the perception link on the climate da because the US initially opposed the reduction and was forced into it.

#### Counterplan competes ---

#### 1] The plan has the “member nations” act individually, while the counterplan is the WTO through the Council and eventually the DSB. That’s distinct, since member nations are not international bodies.

**Collins Dictionary n.d.** “member nations” RJP, DebateDrills https://www.collinsdictionary.com/us/dictionary/english/member-nations

member nations

The [United](https://www.collinsdictionary.com/us/dictionary/english/unite) [Nations](https://www.collinsdictionary.com/us/dictionary/english/nation) is an [international](https://www.collinsdictionary.com/us/dictionary/english/international) organization [comprised](https://www.collinsdictionary.com/us/dictionary/english/comprise) of about 180 member nations.

Sociology (1995)

At the Nato [summit](https://www.collinsdictionary.com/us/dictionary/english/summit), he called on all the member nations to [pledge](https://www.collinsdictionary.com/us/dictionary/english/pledge) to [spend](https://www.collinsdictionary.com/us/dictionary/english/spend) at least 2% of their [national](https://www.collinsdictionary.com/us/dictionary/english/national) [income](https://www.collinsdictionary.com/us/dictionary/english/income) on [defence](https://www.collinsdictionary.com/us/dictionary/english/defence).

Times, Sunday Times (2015)

The [beneficiaries](https://www.collinsdictionary.com/us/dictionary/english/beneficiary) will not be [limited](https://www.collinsdictionary.com/us/dictionary/english/limit) to EU member nations, but [worldwide](https://www.collinsdictionary.com/us/dictionary/english/worldwide).

Times, Sunday Times (2012)

Definition of 'nation'

nation

(neɪʃən)[Explore 'nation' in the dictionary](https://www.collinsdictionary.com/us/dictionary/english/nation)

COUNTABLE NOUN

A nation is an individual country considered together with its social and political structures.

#### 2] Counterplan is neither certain nor immediate---the US reduction hinges on the outcome of DSB. That makes the counterplan competitive.

#### “Resolved” is definite and immediate

Collins 3 Collins English Dictionary – Complete and Unabridged © HarperCollins Publishers 1991, 1994, 1998, 2000, 2003

http://www.thefreedictionary.com/resolved

resolved [rɪˈzɒlvd] adj

fixed in purpose or intention; determined

#### Ought and should are used interchangeably.

Anastasia **Koltai 18**. CEO of MyEnglishTeacher, “Difference Between Ought to and Should,” MyEnglishTeacher, September 25, 2018, <https://www.myenglishteacher.eu/blog/difference-between-ought-to-and-should/>, RJP, DebateDrills.

In most cases, SHOULD and OUGHT TO are used interchangeably today. Both SHOULD and OUGHT TO are used to express advice, obligation, or duty.

#### They mean the same thing

**Cambridge Dictionary No date** (Cambridge Dictionary, accessed on 9-19-2021, Dictionary. cambridge, "Ought to", <https://dictionary.cambridge.org/us/grammar/british-grammar/ought-to>) Adam

Ought to and should are similar in meaning. Should is more common than ought to. Ought to is more formal than should:

There ought to be more street lights here. (means the same as There should be more street lights here.)

I really ought to walk my dog more. He’s so fat. (means the same as I really should walk my dog more. He’s so fat.)

#### “Should” is immediate

Summers 94 (Justice – Oklahoma Supreme Court, “Kelsey v. Dollarsaver Food Warehouse of Durant”, 1994 OK 123, 11-8, http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn13)

¶4 The legal question to be resolved by the court is whether the word "should"[13](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn13) in the May 18 order connotes futurity or may be deemed a ruling *in praesenti*.[14](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn14) The answer to this query is not to be divined from rules of grammar;[15](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn15) it must be governed by the age-old practice culture of legal professionals and its immemorial language usage. To determine if the omission (from the critical May 18 entry) of the turgid phrase, "and the same hereby is", (1) makes it an in futuro ruling - i.e., an expression of what the judge will or would do at a later stage - or (2) constitutes an in in praesenti resolution of a disputed law issue, the trial judge's intent must be garnered from the four corners of the entire record.[16](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn16)

[CONTINUES – TO FOOTNOTE]

[13](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker2fn13) "*Should*" not only is used as a "present indicative" synonymous with *ought* but also is the past tense of "shall" with various shades of meaning not always easy to analyze. See 57 C.J. Shall § 9, Judgments § 121 (1932). O. JESPERSEN, GROWTH AND STRUCTURE OF THE ENGLISH LANGUAGE (1984); St. Louis & S.F.R. Co. v. Brown, 45 Okl. 143, 144 P. 1075, 1080-81 (1914). For a more detailed explanation, see the Partridge quotation infra note 15. Certain contexts mandate a construction of the term "should" as more than merely indicating preference or desirability. Brown, supra at 1080-81 (jury instructions stating that jurors "should" reduce the amount of damages in proportion to the amount of contributory negligence of the plaintiff was held to imply an *obligation* *and to be more than advisory*); Carrigan v. California Horse Racing Board, 60 Wash. App. 79, [802 P.2d 813](http://www.oscn.net/applications/oscn/deliverdocument.asp?box1=802&box2=P.2D&box3=813) (1990) (one of the Rules of Appellate Procedure requiring that a party "should devote a section of the brief to the request for the fee or expenses" was interpreted to mean that a party is under an *obligation* to include the requested segment); State v. Rack, 318 S.W.2d 211, 215 (Mo. 1958) ("should" would mean the same as "shall" or "must" when used in an instruction to the jury which tells the triers they "should disregard false testimony"). [14](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker2fn14) *In praesenti* means literally "at the present time." BLACK'S LAW DICTIONARY 792 (6th Ed. 1990). In legal parlance the phrase denotes that which in law is *presently* or *immediately effective*, as opposed to something that *will* or *would* become effective *in the future [in futurol*]. See Van Wyck v. Knevals, [106 U.S. 360](http://www.oscn.net/applications/oscn/deliverdocument.asp?box1=106&box2=U.S.&box3=360), 365, 1 S.Ct. 336, 337, 27 L.Ed. 201 (1882).

## Case

### 1NC – AT: TT

#### Counter role of the ballot is comparative worlds:

#### 1] inclusion: their model says res is only thing that’s relevant arbitrarily excludes ks and says they’re not allowed in debate instead of conceding that there’s a debate to be had about the merits of non-resolutional positions. Double bind – either only the truth of the res is under the jurisdiction of the judge so they can’t punish people for offensive slurs or they should drop people who make debate unsafe which proves other goods matter

#### 2] hijacks truth-testing: there’s no coherent mechanism to determine truth. The truth of the resolution should be determined by assessing which world is more desirable

#### 3] Our rob is a binary – means no impact to isomorphism – regardless, binaries not always good – ie. Systems that sort students into success/failure cause anxiety

#### 4] “Affirm” and “negate” are not part of the res, they are just words that we have assigned to different sides. Their textuality internal links don’t apply and are arbitrary – we could use “pro” and “con” like PF and it wouldn’t change the activity which proves no impact to constitutivism

Tt doesn’t allow all offense – you would exclude kritiks, policy arguments, theory, etc since they don’t prove the truth of the exact resolution

We don’t collapse – your rotb doesn’t constrain all truth just says truth should come first which our framing disagrees with

### 1NC – Disease Good

#### Future pandemics solve climate change – COVID was responsible for the largest drop in emissions ever

**Alexander 20** [(Kurtis, a general assignment reporter for The San Francisco Chronicle, frequently writing about water, wildfire, climate and the American West. His recent work has focused on the impacts of drought, the widening rural-urban divide and state and federal environmental policy. Before joining the Chronicle, Alexander worked as a freelance writer and as a staff reporter for several media organizations, including The Fresno Bee and Bay Area News Group, writing about government, politics and the environment.) "Coronavirus has altered the global warming trajectory. But for how long?" San Francisco Chronicle, 5/20/20, https://www.sfchronicle.com/health/article/Greenhouse-gas-emissions-on-track-for-record-drop-15279312.php] TDI

The disruption caused by the coronavirus has been so profound that it’s altered the trajectory of global warming.

Not since World War II — and perhaps never before — have the emissions of heat-trapping gases dropped as much around the planet as they have during the COVID-19 outbreak.

The latest and most detailed study yet on the pandemic’s impact on climate pollution, published Tuesday and authored by the research group Global Carbon Project chaired by Stanford University’s Rob Jackson, finds that the Earth will see up to a 7% decrease in carbon dioxide this year. The dip is five times the decline in emissions in 2009, when the recession choked the world’s economy, and double what it was in 1992, after the fall of the Soviet Union.

The paper’s findings mirror other reports that have similarly found sharp drops in greenhouse gases recently. The emerging research also is in agreement that the lull will likely be short-lived and, at best, buy time before the most devastating effects of climate change take hold. The lockdown that has halted factories, energy plants and automobiles during the pandemic is already lifting, and without deliberate action, carbon-intense activities are bound to resume.

“That’s the danger here,” said Jackson, a professor of earth system science and senior fellow at Stanford Woods Institute for the Environment. “We’ve decreased emissions for the wrong reasons. Will they jump back up starting this fall, or could the virus allow us to rethink transportation and other parts of the economy?”

The answer to the question, say Jackson and others, may not be so straightforward. Greenhouse gases could rebound in some areas, and there could be lasting decreases in others.

Measuring heat-trapping gas emissions, for which carbon dioxide is a proxy, is not easy to do, especially in real time. The researchers at the Global Carbon Project analyzed daily economic activity in 69 countries from January through April and modeled the carbon pollution that likely resulted, then compared it to last year. The countries included have historically produced almost all of the world’s carbon dioxide.

The researchers found that China, the largest polluter, reduced emissions by nearly 24% on some days in mid-February. The United States, the second-largest polluter, cut emissions by nearly 32% for almost two weeks in mid-April. The European Union, including Great Britain, trimmed emissions by about 27% during the first week of April.

The dates of peak reductions varied in different parts of the globe because each locked down at a different time. The biggest cumulative drop in carbon dioxide was on April 7 and measured about 17%, according to the study.

While a variety of activity explains the declines, fewer people driving was the largest contributor worldwide. Less industrial pollution was also a big contributor.

Based on the observed drops in emissions, the researchers estimate that going forward, carbon dioxide will fall between 4% and 7% for the year worldwide, depending on how quickly countries end their lockdowns.

Jackson said the amount of the decline can be viewed as both considerable, given that it’s the largest ever seen, and humbling because it’s the minimum needed annually to put the planet on track to meet the Paris climate agreement — enough of a drop to prevent the global temperature from rising 2 degrees Celsius above preindustrial levels.

“We would need to do this every year,” he said.

The International Energy Agency recently projected an 8% dip in greenhouse gases for the year while the International Monetary Fund came up with an estimate closer to 6%. Both organizations said carbon pollution would likely rise again in 2021.

After the decline in emissions in 2009 of about 1.4%, the following year saw an increase of 5.1%.

The Global Carbon Project says there’s reason to think that at least some parts of the globe will try to prevent heat-trapping gases from bouncing back. Stimulus programs aimed at developing clean energy and new carbon-friendly ways of living adopted during the pandemic, such as working from home, could help limit emissions.

“Cities from Seattle to Milan are keeping roads closed to cars and letting them stay open to bikes and pedestrians even after the shelter-in-place,” Jackson said. “And maybe COVID-19 and stimulus funding will jump-start electric cars.”

#### Disease doesn’t cause extinction

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

But when people ask me if I’m worried about infectious diseases, they’re often not asking about the threat to human lives; they’re asking about the threat to human life. With each outbreak of a headline-grabbing emerging infectious disease comes a fear of extinction itself. The fear envisions a large proportion of humans succumbing to infection, leaving no survivors or so few that the species can’t be sustained.

I’m not afraid of this apocalyptic scenario, but I do understand the impulse. Worry about the end is a quintessentially human trait. Thankfully, so is our resilience.

For most of mankind’s history, infectious diseases were the existential threat to humanity—and for good reason. They were quite successful at killing people: The 6th century’s Plague of Justinian knocked out an estimated 17 percent of the world’s population; the 14th century Black Death decimated a third of Europe; the 1918 influenza pandemic killed 5 percent of the world; malaria is estimated to have killed half of all humans who have ever lived.

Any yet, of course, humanity continued to flourish. Our species’ recent explosion in lifespan is almost exclusively the result of the control of infectious diseases through sanitation, vaccination, and antimicrobial therapies. Only in the modern era, in which many infectious diseases have been tamed in the industrial world, do people have the luxury of death from cancer, heart disease, or stroke in the 8th decade of life. Childhoods are free from watching siblings and friends die from outbreaks of typhoid, scarlet fever, smallpox, measles, and the like.

So what would it take for a disease to wipe out humanity now?

In Michael Crichton’s The Andromeda Strain, the canonical book in the disease-outbreak genre, an alien microbe threatens the human race with extinction, and humanity’s best minds are marshaled to combat the enemy organism. Fortunately, outside of fiction, there’s no reason to expect alien pathogens to wage war on the human race any time soon, and my analysis suggests that any real-life domestic microbe reaching an extinction level of threat probably is just as unlikely.

Any apocalyptic pathogen would need to possess a very special combination of two attributes. First, it would have to be so unfamiliar that no existing therapy or vaccine could be applied to it. Second, it would need to have a high and surreptitious transmissibility before symptoms occur. The first is essential because any microbe from a known class of pathogens would, by definition, have family members that could serve as models for containment and countermeasures. The second would allow the hypothetical disease to spread without being detected by even the most astute clinicians.

The three infectious diseases most likely to be considered extinction-level threats in the world today—influenza, HIV, and Ebola—don’t meet these two requirements. Influenza, for instance, despite its well-established ability to kill on a large scale, its contagiousness, and its unrivaled ability to shift and drift away from our vaccines, is still what I would call a “known unknown.” While there are many mysteries about how new flu strains emerge, from at least the time of Hippocrates, humans have been attuned to its risk. And in the modern era, a full-fledged industry of influenza preparedness exists, with effective vaccine strategies and antiviral therapies.

HIV, which has killed 39 million people over several decades, is similarly limited due to several factors. Most importantly, HIV’s dependency on blood and body fluid for transmission (similar to Ebola) requires intimate human-to-human contact, which limits contagion. Highly potent antiviral therapy allows most people to live normally with the disease, and a substantial group of the population has genetic mutations that render them impervious to infection in the first place. Lastly, simple prevention strategies such as needle exchange for injection drug users and barrier contraceptives—when available—can curtail transmission risk.

Ebola, for many of the same reasons as HIV as well as several others, also falls short of the mark. This is especially due to the fact that it spreads almost exclusively through people with easily recognizable symptoms, plus the taming of its once unfathomable 90 percent mortality rate by simple supportive care.

Beyond those three, every other known disease falls short of what seems required to wipe out humans—which is, of course, why we’re still here. And it’s not that diseases are ineffective. On the contrary, diseases’ failure to knock us out is a testament to just how resilient humans are. Part of our evolutionary heritage is our immune system, one of the most complex on the planet, even without the benefit of vaccines or the helping hand of antimicrobial drugs. This system, when viewed at a species level, can adapt to almost any enemy imaginable. Coupled to genetic variations amongst humans—which open up the possibility for a range of advantages, from imperviousness to infection to a tendency for mild symptoms—this adaptability ensures that almost any infectious disease onslaught will leave a large proportion of the population alive to rebuild, in contrast to the fictional Hollywood versions.

#### Covid proves diseases decrease conflict –

Salemi 20 Colette Salemi 10-15-2020 "Does COVID-19 raise the risk of violent conflict? Not everywhere" <https://archive.is/h591O#selection-309.0-312.0> (Colette Salemi is a PhD student in applied economics at the University of Minnesota. Her research focuses on conflict, forced displacement, environmental degradation and their intersections.)//Elmer

How we did our research We **used** the Armed Conflict Location and Event Data (**ACLED**), a **database** **that counts** the **number of conflict events daily around the world**. For 2019 and 2020, ACLED includes more than 100 countries in Africa, Asia, Latin America and Eastern Europe — and tracks three categories of violent conflict: battles, violence against civilians and explosions/remote violence. We examine trends in the number of conflict events over time. To see whether the trend changes in response to covid-19, we look at what happened after the World Health Organization declared a global pandemic (March 11) or the country declared a lockdown. [Don’t miss any of TMC’s smart analysis! Sign up here for our newsletter.] The **relationship between pandemics and conflict is theoretically unclear.** In some countries, job losses from the covid-19 pandemic mean people have fewer income-generating options — that can make participation in violence seem a more viable alternative. But if **market disruptions** and reduced global demand are **driving down** the **value of natural resources** such as oil wells, then **we** may **see less conflict** over control of such resources. We then **conducted** case **studies** based **on** our knowledge of countries with high rates of violent conflict before **covid**-19. These include countries with active civil wars (such as Syria) as well as countries with violent militia groups (such as the Philippines). Conflict during the coronavirus pandemic varies greatly **Worldwide**, **we didn’t observe an increase in violent conflict**. **If anything, conflict has decreased**, as the figure below shows. **Violent conflict** between March and August 2020 **was 23 percent lower** than violent conflict during the same period in 2019. Comparing these time periods, battles are down 20 percent and remote violence and bombings are down 40 percent. But violence against civilians — the deliberate attack of unarmed noncombatants by armed groups — continued at similar rates globally.

Chart, line chart

Description automatically generated

### 1NC – Contention

#### Only way a monopoly could happen is if there is no substitutes or competition in the market – Me Too Drugs prove that’s not the case.

**Schultz 14** (Mark Schultz, 2-24-2014, "A free market perspective on intellectual property rights," American Enterprise Institute - AEI, <https://www.aei.org/technology-and-innovation/intellectual-property/free-market-perspective-intellectual-property-rights/>) // CH

**Myth 1: Intellectual property is a monopoly**

One complaint is that intellectual property grants its owners a “monopoly.”**Prof.** Ed **Kitch called this** assertion one of the “**Elementary** and Persistent **Errors in the Economic Analysis** of Intellectual Property,”and he’s right. Intellectual property does not create an economic monopoly, because **a monopoly exists only where there are no close substitutes and thus no competition.**

**Most markets covered** by intellectual property **are intensely competitive**, and the providers of products have little market power. If you go to the multiplex this weekend and find that a ticket for the movie you want to see is triple the price of other tickets, would you lack choices? Of course not! You could see another movie, or you could choose other entertainment.

The same is true of markets covered by patents, **in part because of** what critics often deride as patents on “mere”incremental innovations or **“me too”products** (which is ironic, given the concurrent monopoly critique). Need a cholesterol drug? **You have a host of statins from which to choose**. Osteoporosis? Choose from Fosomax, Actonel, or Boniva. **Each of the owners of patents in these products has exclusive rights**; none of them has a monopoly.

And in the rare cases when intellectual property does result in the creation of monopoly power, **holders of intellectual property rights are constrained by the antitrust laws** in how those rights are exercised.

#### Reducing protections of IP leads to theft and the free riding of ideas.

Van Dyke 18 [Raymond Van Dyke, Technology and Intellectual Property Attorney and Patent Practitioner, 7-17-2018, accessed on 8-8-2021, IPWatchdog, "The Categorical Imperative for Innovation and Patenting", https://www.ipwatchdog.com/2018/07/17/categorical-imperative-innovation-patenting/id=99178/] //D.Ying recut Lex VM

As we shall see, applying Kantian logic entails first acknowledging some basic principles; that the people have a right to express themselves, that that expression (the fruits of their labor) has value and is theirs (unless consent is given otherwise), and that government is obligated to protect people and their property. Thus, an inventor or creator has a right in their own creation, which cannot be taken from them without their consent. So, employing this canon, a proposed Categorical Imperative (CI) is the following Statement: creators should be protected against the unlawful taking of their creation by others. Applying this Statement to everyone, i.e., does the Statement hold water if everyone does this, leads to a yes determination. Whether a child, a book or a prototype, creations of all sorts should be protected, and this CI stands. This result also dovetails with the purpose of government: to protect the people and their possessions by providing laws to that effect, whether for the protection of tangible or intangible things. However, a contrary proposal can be postulated: everyone should be able to use the creations of another without charge. Can this Statement rise to the level of a CI? This proposal, upon analysis would also lead to chaos. Hollywood, for example, unable to protect their films, television shows or any content, would either be out of business or have robust encryption and other trade secret protections, which would seriously undermine content distribution and consumer enjoyment. Likewise, inventors, unable to license or sell their innovations or make any money to cover R&D, would not bother to invent or also resort to strong trade secret. Why even create? This approach thus undermines and greatly hinders the distribution of ideas in a free society, which is contrary to the paradigm of the U.S. patent and copyright systems, which promotes dissemination. By allowing freeriding, innovation and creativity would be thwarted (or at least not encouraged) and trade secret protection would become the mainstay for society with the heightened distrust. Also, allowing the free taking of ideas, content and valuable data, i.e., the fruits of individual intellectual endeavor, would disrupt capitalism in a radical way. The resulting more secretive approach in support of the above free-riding Statement would be akin to a Communist environment where the State owned everything and the citizen owned nothing, i.e., the people “consented” to this. It is, accordingly, manifestly clear that no reasonable and supportable Categorical Imperative can be made for the unwarranted theft of property, whether tangible or intangible, apart from legitimate exigencies. On the positive front, there is a Categorical Imperative that creators should be encouraged to create, which is imminently reasonable and supportable. Likewise, the statement set forth in the Constitution that Congress should pass laws “To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries” is supportive, as a Categorical Imperative, for the many reasons elucidated two centuries ago by Madison and others, and endorsed by George Washington, Thomas Jefferson, and later by Abraham Lincoln. A Categorical Imperative, universality, however, may be a stretch outside of the United States since other cultures may not treasure the progress of science and the useful arts and freedoms that we Americans do. Nonetheless, it is certainly a supportable proposition in the United States, and even a Categorical Imperative that we must do it!

#### IP is a form of property

Zeidman et al. 16 [Bob Zeidman &amp; Eashan Gupta, "Why Libertarians Should Support a Strong Patent System", IPWatchdog, 1-5-2016, https://www.ipwatchdog.com/2016/01/05/why-libertarians-should-support-a-strong-patent-system/id=64438/, accessed: 8-9-2021.] //Lex VM

Many libertarians believe that intellectual property, being intangible, is not real property. A formal libertarian definition of property is difficult to formulate, but we would say that property is that which can be produced or contribute to production. Intellectual property falls clearly within these constraints. Yet some libertarians complain that intellectual is not tangible and is defined by government regulation—the patent laws—such that it would not exist without government definition. Let us look at this argument closer. Land is unquestionably property in the minds of libertarians. Yet the land upon which a house is built was not created by the property owner. It was created by nature or God, depending on your inclination, but no one would claim it to be created by the owner, whereas intellectual property is unquestionably created by the inventor. And how far do property lines extend? Property lines are determined by local governments. One can argue that property lines are negotiated by owners and enforced by governments, but when we moved into our homes, there were no negotiations with surrounding property owners. And how far above ground and below ground do property rights extend? These limitations are definitely not negotiated with other property owners but are determined by laws enforced by governments. Patents also have limitations in terms of scope and time that are determined by government laws. One can see that limitations on patents are similar to those on physical property and in some respects are more closely connected to production. For these reasons, libertarians should recognize patents as they do other forms of property. As a secondary but important example, libertarians are generally concerned about government spying on private conversations. When the government captures a phone conversation, it is not physically taking property. It is simply copying intangible data that exists as a form of transient electrical signals. Copying does not involve removing the original—the phone conversation is not destroyed when it is copied. Yet libertarians recognize that this copying of intangible data is a kind of theft of property. Libertarians should thus be wary of making the argument that intangible patents cannot be property or they may lose their contrary argument that private conversations are personal property to be protected.

#### Means the state can’t remove protections.

Zeidman et al. 2 [Bob Zeidman &amp; Eashan Gupta, "Why Libertarians Should Support a Strong Patent System", IPWatchdog, 1-5-2016, https://www.ipwatchdog.com/2016/01/05/why-libertarians-should-support-a-strong-patent-system/id=64438/, accessed: 8-9-2021.] //Lex VM

Libertarians believe in property rights and government protection of those rights as one of the few necessary requirements of government. Ownership of property and free markets leads to competitive production and trade of goods, which in turn leads to prosperity for all of society. Intellectual property is property like other forms of property, and so government must protect IP as it protects other forms of property because it too leads to competition and trade and prosperity. Libertarians should encourage a strong patent system and object to any “reforms” that limit intellectual property ownership or introduce more government regulation than is required.

#### The goal of IP and physical property are the same. Arguing a distinction is misguided.

Schultz 14 [Mark Schultz, "A free market perspective on intellectual property rights", American Enterprise Institute - AEI, 2-24-2014, https://www.aei.org/technology-and-innovation/intellectual-property/free-market-perspective-intellectual-property-rights/, accessed: 8-25-2021.] //Lex VM

Point 1. Intellectual property secures the same values as physical property As an institution, property secures rights in what we create through our work. In this regard, there’s no cause or need to distinguish intellectual property from any other forms of property. In all cases, a person employs his intellect and talents to impose his plan and will on his environment to bring something new into the world. This is the essence of productive labor, the fruits of which property protects. Distinguishing between physical and intellectual labor, as some would, is misguided, because both are, at heart, the same activity. Whether it is a carpenter building a house, a farmer planting a field, an author writing a book, a director filming a movie, or an inventor developing a new drug, the activity is, ultimately, productive labor. Moreover, both have the same moral status. The songwriter and the craftsman each deserves and needs to own the fruits of his labor to secure his life and liberty.

#### AT Pievatolo and Hale

This assumes that people don’t have protecitons and property over ip – people only have freedom to innovate if it isn’t in violation of other peoples right to property