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#### Collaboration between companies high now and key to solving covid – the aff destroys it.

Zilber 21 [Einav; Owner of Zilber IP; “The proposed TRIPs covid waiver is a bad idea that could do a lot of good,” IAM-Media; 6/23/21; <https://www.iam-media.com/law-policy/the-proposed-trips-covid-waiver-bad-idea-could-do-lot-of-good>] Justin + Diego

**Uncertainties over trade secret protection could undermine collaboration Collaboration has been critical to addressing the pandemic. This is perhaps best exemplified by the scramble for personal protective equipment and ventilator manufacturing in the earliest days of the crisis. The corporate sector responded rapidly, with companies collaborating in development, supply-chain facilitation and manufacturing, while novel partnerships sprang up between organisations around the globe**.For example, Israeli defence company and manufacturer of the world-famous Iron Dome air-defence system Rafael harnessed its R&D and manufacturing capabilities to solve various issues raised by covid-19. Among other projects, Rafael worked with hospital doctors to develop a system that enables two patients to be treated by a single ventilator, with separate pressure controls in the lungs of each individual. Rafael freely distributed this design and the accompanying manufacturing information, as well as the blueprints for a specialised mask for patients receiving non-invasive ventilation treatment, to medical organisations around the world**. The covid-19 masks were adapted from anti-gas mask homeland security technology. In the United States, medical device giant Medtronic shared its Puritan Bennett 560 ventilator technology, a product sold in 35 countries. Among the materials publicly shared were hardware-design specifications and manufacturing instructions, design documents (including manufacturing tools, printed circuit-board drawings, multiple bills of materials and 3D CAD files) and software source-code files.** The materials were provided under a permissive licence, allowing others to use the technology broadly during the pandemic. The private sector’s success in effectively speeding up the development and delivery of equipment and products can be attributed to many factors, including bold leadership, a sense of urgency and responsibility, engineer dedication and creativity, a collaborative mindset and digital communication. **However, having a global and trustworthy IP system also significantly facilitated companies’ willingness to collaborate and share. The IP system enables companies to precisely control the scope of sharing while keeping selected technologies tightly shuttered. By releasing technologies, companies inevitably erode their own competitive edge. The material that is shared reveals solutions that might otherwise have been patented; engineers are educated with a range of methodologies and know-how, and this cannot be unlearned. This is critical, especially when core technology is migrated to covid-19 applications. Should the TRIPs waiver be enacted, companies could lose that level of control and thus be discouraged from collaborating at all.** Further, the success stories of private sector collaboration clearly demonstrate that it is not enough merely to share patents**. Rapid deployment of new, unfamiliar technologies by companies requires access to know-how that is typically protected as trade secrets. While patents are concrete, published and easily managed, trade secrets – and other forms of know-how – are not. It is the sharing company that is in the best position to compile and prepare the materials reflecting its technology. Any effort to apply an external judicial or government review over the scope of shared material could turn out to be futile.** Another troubling uncertainty concerns the vast amount of confidential information that companies already share externally. For example, they already share information with governments in the case of regulatory approvals. Will the IP waiver enable governments to use regulatory company information for local production? Similarly, companies share their technologies with suppliers, customers and partners. A significant amount of valuable information is already illegally available as a result of industrial espionage and the technology black market. How will the misappropriation of confidential information be treated under the IP waiver? Could it have the practical effect of legalising otherwise unlawful access to technology?

#### Key to long term innovation.

Albrectsen 17 [Anne-Birgitte; Chief Executive Officer, Plan International; “Why collaboration will be key to achieving the Sustainable Development Goals,” World Economic Forum; 1/31/17; <https://www.weforum.org/agenda/2017/01/realising-the-potential-of-cross-sector-partnerships/>] Justin+Diego

Since 2015, when the United Nations established a set of shared goals and targets for achieving sustainable development around the world, the development community has been excited, energized but also a little bit wary. While the ambition contained within the Global Goals is high, the challenge is vast. What is more, we face a moving target. **In particular, the Fourth Industrial Revolution, driven by rapid technological advances, has the potential to change everything and, while there will undoubtedly be new growth, benefits and new opportunities, the impact on the world’s poorest could be disastrous. The already demanding targets we have set for ourselves will become even harder to achieve.** The need for surprising alliances We do not yet know just how things will unfold, but one thing is for sure**: the scale, scope and complexity of the economic and social transformation to come will be such that no one sector** – government, business, civil society or academia **– will be able to manage the transformation alone. We’re going to need some surprising alliances that bring different sectors together if we are to overcome its challenges.** Civil society organisations, with their capacity for increasing accountability and promoting participation, can play a critical partnership role with both governments and businesses. **By sharing information, resources, activities, and capabilities we can achieve things together that we could never achieve alone.** At Plan International, we’re already busy convening strategic partnerships with businesses like Accenture, and a particular priority for us now is to improve the position of girls within the poorest countries. There is a direct motivation for businesses to get involved. Studies have shown that investing in girls and gender equality can have a direct impact on economic growth. For example, the World Bank found that investing in girls to close the education gap with boys would lead to lifetime earnings increases equivalent to an increase in annual GDP growth rates of about 1.5%. Not just Corporate Social Responsibility This kind of **cross-sector partnership is essential to achieving the scale and sustained impact we need to see. These partnerships can unleash innovative ways of working, mobilizing expertise and hard to reach resources, and create shared accountability in an increasingly complex world. There is a real opportunity to develop new approaches to partnering that go beyond philanthropy, towards generating shared value.** Each sector has a valuable role to play, but it is the value of collaboration that brings real transformation. Building partnership models which are long lasting, scalable and transformative, and which create shared value will be key. The rapid transformation heralded by the Fourth Industrial Revolution will affect economic, social, environmental, cultural and political life more widely, demanding new ways of working together. Already, traditional boundaries between the sectors have become blurred, with a less direct role for governments and a wider governance role for business and civil **society. In the context of global instability and economic transformation, there are new opportunities and new responsibilities for each sector and, increasingly, a shared set of interests in achieving the kind of world envisaged in the UN’s Global Goals, not least in Sustainable Development Goal 17 which is about creating partnerships for the Goals.** Creating shared value in east Africa At Plan International, we are already working closely with Accenture and others to lay foundations for transformative social and economic change. Developing countries face massive challenges with youth unemployment, and as many as two-thirds of the youth population aged 15 to 24 are unemployed or in irregular employment. The impact of global economic change is likely to exacerbate the problem, and the high unemployment rate among young people can be a potential source of social unrest and political instability. Plan International understands that it is also an opportunity. If nations and institutions can harness the tremendous power and resourcefulness of young people, they can be part of the solution to one of the world’s most pressing problems. For example, in Uganda A Working Future initiative was co-created by Accenture Development Partnerships and Plan International to support youth economic empowerment through innovative collaboration across all sectors. Our work together is part of the company’s flagship corporate citizenship initiative, ‘Skills to Succeed,’ which advances employment and entrepreneurship opportunities for individuals around the globe, leveraging technology to drive impact at scale. The shared value model of the A Working Future initiative With funding and technical support from the Swedish International Development Cooperation Agency, a wide ranging partnership – including a number of local businesses – has been formed to change the lives of young people in rural Eastern Uganda by providing them access to financial services, teaching them critical skills, and linking them to work opportunities. The private sector has been invaluable at every stage, from the design of the programme to the delivery of training. Combined with Plan International’s grass roots reach and access, rights based approach, trusted community level relationships, technical expertise and local networks, as well as other partners’ contributions, the outcomes have been phenomenal and already over 12,000 young people have benefitted from the programme. The participating youth have seen a 621% increase in average monthly income and a 631% increase in savings. How the partners and element of A Working Future fit together Working with companies like Accenture, we’re now scaling-up the model to bring skills and jobs to 100,000 young people in four African countries: Uganda, Zambia, Tanzania and Egypt. The success has been due to the collaborative partnership mode, which brings together a mix of strategic partners from different sectors both at the global and local level, but also retains the agility to adapt to the local context, and to find a way of working that creates true sustainable change and impact, and value for all. Deepening partnerships in an uncertain world **Collaboration – working together – was one of the core objectives of A Working Future from the start, much more than simply benefiting from the each other’s resources and capabilities. The initiative is a model for the kind of partnerships I believe will be increasingly important in coming years. As the boundaries between sectors become blurred, the interdependencies become more pronounced yet the complexities increase, the sectors need to become better able to find common ground. Different sectors should be open minded about working together, not afraid to take risks to collaborate in new ways, and to ensure the lessons of these partnership models** – good and bad – are shared widely. As we’ve seen in our partnership with Accenture, we learn more about each other over time. We find new opportunities to work together and to create new solutions. As 3,000 global leaders met last week in Davos to reflect on how together we can create responsive and responsible leadership in a changing world, we were able to share some of these new models of partnership we have been pioneering. We shared our insights on the changing dynamics between the sectors, and showed how we can work together to transform the lives of 100 million girls, our new ambition. **The times are uncertain, the challenges huge, but the task is one that we cannot afford to duck.**

#### Innovation solves extinction – avoids tipping points.

Naam 13 [Ramez; Fellow of the Institute for Ethics and Emerging Technologies; “How Innovation Could Save the Planet” Awaken.com; March-April 2013; <https://awaken.com/2013/02/how-innovation-could-save-the-planet/>] // Re-Cut Justin

The Best of Times: Unprecedented Prosperity There are many ways in which we are living in the most wonderful age ever. We can imagine we are heading toward a sort of science-fiction utopia, where we are incredibly rich and incredibly prosperous, and the planet is healthy. But there are other reasons to fear that we’re headed toward a dystopia of sorts. Ramez Naam spoke at WorldFuture 2013, the annual conference of the World Future Society in Chicago, in July of 2013. On the positive side, life expectancy has been rising for the last 150 years, and faster since the early part of the twentieth century in the developing world than it has in the rich world. Along with that has come a massive reduction in poverty. The most fundamental empowerer of humans—education—has also soared, not just in the rich world, but throughout the world. Another great empowerer of humanity is connectivity: Access to information and access to communication both have soared. The number of mobile phones on the planet was effectively zero in the early 1990s, and now it’s in excess of 4 billion. More than three-quarters of humanity, in the span of one generation, have gotten access to connectivity that, as my friend Peter Diamandis likes to say, is greater than any president before 1995 had. A reasonably well-off person in India or in Nigeria has better access to information than Ronald Reagan did during most of his career. With increased connectivity has come an increase in democracy. As people have gotten richer, more educated, more able to access information, and more able to communicate, they have demanded more control over the places where they live. The fraction of nations that are functional democracies is at an all-time high in this world—more than double what it was in the 1970s—with the collapse of the Soviet Union.\* Economically, the world is a more equal place than it has been in decades. In the West, and especially in the United States, we hear a lot about growing inequality, but on a global scale, the opposite is true. As billions are rising out of poverty around the world, the global middle classes are catching up with the global rich. In many ways, this is the age of the greatest human prosperity, freedom, and potential that has ever been on the face of this planet. But in other ways, we are facing some of the largest risks ever. The Worst of Times: The Greatest Risks At its peak, the ancient Mayan city of Tikal was a metropolis, a city of 200,000 people inside of a civilization of about 20 million people. Now, if you walk around any Mayan city, you see mounds of dirt. That’s because these structures were all abandoned by about the mid-900s AD. We know now what happened: The Mayan civilization grew too large. It overpopulated. To feed themselves, they had to convert forest into farmland. They chopped down all of the forest. That, in turn, led to soil erosion. It also worsened drought, because trees, among other things, trap moisture and create a precipitation cycle. When that happened, and was met by some normal (not human-caused) climate change, the Mayans found they didn’t have enough food. They exhausted their primary energy supply, which is food. That in turn led to more violence in their society and ultimately to a complete collapse. The greatest energy source for human civilization today is fossil fuels. Among those, none is more important than oil. In 1956, M. King Hubbert looked at production in individual oil fields and predicted that the United States would see the peak of its oil production in 1970 or so, and then drop. His prediction largely came true: Oil production went up but did peak in the 1970s, then plummeted. Oil production has recently gone up in the United States a little bit, but it’s still just barely more than half of what it was in its peak in the 1970s. Hubbert also predicted that the global oil market would peak in about 2000, and for a long time he looked very foolish. But it now has basically plateaued. Since 2004, oil production has increased by about 4%, whereas in the 1950s it rose by about 4% every three months. We haven’t hit a peak; oil production around the world is still rising a little bit. It’s certainly not declining, but we do appear to be near a plateau; supply is definitely rising more slowly than demand. Though there’s plenty of oil in the ground, the oil that remains is in smaller fields, further from shore, under lower pressure, and harder to pump out. Water is another resource that is incredibly precious to us. The predominant way in which we use water is through the food that we eat: 70% of the freshwater that humanity uses goes into agriculture. The Ogallala Aquifer, the giant body of freshwater under the surface of the Earth in the Great Plains of the United States, is fossil water left from the melting and the retreat of glaciers in the end of the last Ice Age, 12,000–14,000 years ago. Its refill time is somewhere between 5,000 and 10,000 years from normal rainfall. Since 1960, we’ve drained between a third and a half of the water in this body, depending on what estimate you look at. In some areas, the water table is dropping about three feet per year. If this was a surface lake in the United States or Canada, and people saw that happening, they’d stop it. But because it’s out of sight, it’s just considered a resource that we can tap. And indeed, in the north Texas area, wells are starting to fail already, and farms are being abandoned in some cases, because they can’t get to the water that they once did. Perhaps the largest risk of all is climate change. We’ve increased the temperature of the planet by about 2°F in the last 130 years, and that rate is accelerating. This is primarily because of the carbon dioxide we’ve put into the atmosphere, along with methane and nitrous oxide. CO2 levels, now at over 390 parts per million, are the highest they’ve been in about 15 million years. Ice cores go back at least a million years, and we know that they’re the highest they’ve been in that time. Historically, when CO2 levels are high, temperature is also high. But also, historically, in the lifetime of our species, we’ve actually never existed as human beings while CO2 levels have been this high. For example, glaciers such as the Bear and Pedersen in Alaska have disappeared just since 1920. As these glaciers melt, they produce water that goes into the seas and helps to raise sea levels. Over the next century, the seas are expected to rise about 3 to 6 feet. Most of that actually will not be melting glaciers; it’s thermal expansion: As the ocean gets warmer, it gets a little bit bigger. But 3 to 6 feet over a century doesn’t sound like that big a deal to us, so we think of that as a distant problem. The reality is that there’s a more severe problem with climate change: its impact on the weather and on agriculture. In 2003, Europe went through its worst heat wave since 1540. Ukraine lost 75% of its wheat crop. In 2009, China had a once-in-a-century level drought; in 2010 they had another once-in-a-century level drought. That’s twice. Wells that had given water continuously since the fifteenth century ran dry. When those rains returned, when the water that was soaked up by the atmosphere came back down, it came down on Pakistan, and half of Pakistan was under water in the floods of 2010. An area larger than Germany was under water. Warmer air carries more water. Every degree Celsius that you increase the temperature value of air, it carries 7% more water. But it doesn’t carry that water uniformly. It can suck water away from one place and then deliver it in a deluge in another place. So both the droughts are up and flooding is up simultaneously, as precipitation becomes more lumpy and more concentrated. In Russia’s 2010 heat wave, 55,000 people died, 11,000 of them in Moscow alone. In 2011, the United States had the driest 10-month period ever in the American South, and Texas saw its worst wildfires ever. And 2012 was the worst drought in the United States since the Dust Bowl—the corn crop shrank by 20%. So that’s the big risk the world faces: that radical weather will change how we grow food, which is still our most important energy source—even more important than fossil fuels. A number of people in the environmentalist movement are saying that we have to just stop growing. For instance, in his book Peak Everything: Waking Up to the Century of Declines, Richard Heinberg of the Post-Carbon Institute says that the Earth is full. Get used to it, and get ready for a world where you live with less wealth, and where your children live with less wealth, than any before. I don’t think this idea of stopping growth is realistic, because there are a top billion people who live pretty well and there are another 6 billion who don’t and are hungry for it. We see demand rising for everything—water, food, energy—and that demand is rising not in the United States or Europe or Canada or Australia. It’s rising in the developing world. This is the area that will create all of the increased demand for physical resources. Even if we could, by some chance, say That’s enough, sorry, we’re not going to let you use these resources, which is doubtful, it wouldn’t be just, because the West got rich by using those natural resources. So we need to find a different way. Ideas as a Resource Expander, Resource Preserver, and Waste Reducer The best-selling environmental book of all time, Limits to Growth, was based on computer modeling. It was a simple model with only about eight variables of what would happen in the world. It showed that economic growth, more wealth, would inevitably lead to more pollution and more consumption of finite resources, which would in turn take us beyond the limits and lead ultimately to collapse. While it’s been widely reported recently that its predictions are coming true, that’s actually not the case. If you look at the vast majority of the numbers that the researchers predict in this model, they’re not coming true. Why did they get these things wrong? The most important thing that the forecasters did was underestimate the power of new ideas to expand resources, or to expand wealth while using fewer resources. Ideas have done tremendous things for us. Let’s start with food. In The Population Bomb (1968), Paul Ehrlich predicted that food supply could not support the population, just as Malthus did. But what’s happened is that we’ve doubled population since 1960, and we’ve nearly tripled the food supply in total. We’ve increased by 30%–40% the food supply per person since the 1960s. Let’s look at this on a very long time scale. How many people can you feed with an acre of land? Before the advent of agriculture, an acre of land could feed less than a thousandth of a person. Today it’s about three people, on average, who can be fed by one acre of land. Pre-agriculture, it took 3,000 acres for one person to stay alive through hunting and gathering. With agriculture, that footprint has shrunk from 3,000 acres to one-third of one acre. That’s not because there’s any more sunlight, which is ultimately what food is; it’s because we’ve changed the productivity of the resource by innovation in farming—and then thousands of innovations on top of that to increase it even more. In fact, the reason we have the forests that we have on the planet is because we were able to handle a doubling of the population since 1960 without increasing farmland by more than about 10%. If we had to have doubled our farmland, we would have chopped down all the remaining forests on the planet. Ideas can reduce resource use. I can give you many other examples. In the United States, the amount of energy used on farms per calorie grown has actually dropped by about half since the 1970s. That’s in part because we now only use about a tenth of the energy to create synthetic nitrogen fertilizer, which is an important input. The amount of food that you can grow per drop of water has roughly doubled since the 1980s. In wheat, it’s actually more than tripled since 1960. The amount of water that we use in the United States per person has dropped by about a third since the 1970s, after rising for decades. As agriculture has gotten more efficient, we’re using less water per person. So, again, ideas can reduce resource use. Ideas can also find substitutes for scarce resources. We’re at risk of running out of many things, right? Well, let’s think about some things that have happened in the past. The sperm whale was almost hunted into extinction. Sperm whales were, in the mid-1800s, the best source of illumination. Sperm whale oil—spermaceti—was the premier source of lighting. It burned without smoke, giving a clear, steady light, and the demand for it led to huge hunting of the sperm whales. In a period of about 30 years, we killed off about a third of the sperm whales on the planet. That led to a phenomenon of “peak sperm-whale oil”: The number of sperm whales that the fleet could bring in dropped over time as the sperm whales became more scarce and more afraid of human hunters. Demand rose as supply dropped, and the prices skyrocketed. So it looked a little bit like the situation with oil now. That was solved not by the discovery of more sperm whales, nor by giving up on this thing of lighting. Rather, Abraham Gesner, a Canadian, discovered this thing called kerosene. He found that, if he took coal, heated it up, captured the fumes, and distilled them, he could create this fluid that burned very clear. And he could create it in quantities thousands of times greater than the sperm whales ever could have given up. We have no information suggesting that Gesner was an environmentalist or that he cared about sperm whales at all. He was motivated by scientific curiosity and by the huge business opportunity of going after this lighting market. What he did was dramatically lower the cost of lighting while saving the sperm whales from extinction. One more thing that ideas can do is transform waste into value. In places like Germany and Japan, people are mining landfills. Japan estimates that its landfills alone contain 10-year supplies of gold and rare-earth minerals for the world market. Alcoa estimates that the world’s landfills contain a 15-year supply of aluminum. So there’s tremendous value. When we throw things away, they’re not destroyed. If we “consume” things like aluminum, we’re not really consuming it, we’re rearranging it. We’re changing where it’s located. And in some cases, the concentration of these resources in our landfills is actually higher than it was in our mines. What it takes is energy and technology to get that resource back out and put it back into circulation. Ideas for Stretching the Limits So ideas can reduce resource use, can find substitutes for scarce resources, and can transform waste into value. In that context, what are the limits to growth? Is there a population limit? Yes, there certainly is, but it doesn’t look like we’re going to hit that. Projections right now are that, by the middle of this century, world population will peak between 9 billion and 10 billion, and then start to decline. In fact, we’ll be talking much more about the graying of civilization, and perhaps underpopulation—too-low birthrates on a current trend. What about physical resources? Are there limits to physical resource use on this planet? Absolutely. It really is a finite planet. But where are those limits? To illustrate, let’s start with energy. This is the most important resource that we use, in many ways. But when we consider all the fossil fuels that humanity uses today—all the oil, coal, natural gas, and so on—it pales in comparison to a much larger resource, all around us, which is the amount of energy coming in from our Sun every day. The amount of energy from sunlight that strikes the top of the atmosphere is about 10,000 times as much as the energy that we use from fossil fuels on a daily basis. Ten seconds of sunlight hitting the Earth is as much energy as humanity uses in an entire day; one hour of sunlight hitting the Earth provides as much energy to the planet as a whole as humanity uses from all sources combined in one year. This is an incredibly abundant resource. It manifests in many ways. It heats the atmosphere differentially, creating winds that we can capture for wind power. It evaporates water, which leads to precipitation elsewhere, which turns into things like rivers and waterfalls, which we can capture as hydropower. But by far the largest fraction of it—more than half—is photons hitting the surface of the Earth. Those are so abundant that, with one-third of 1% of the Earth’s land area, using current technology of about 14%-efficient solar cells, we could capture enough electricity to power all of current human needs. The problem is not the abundance of the energy; the problem is cost. Our technology is primitive. Our technology for building solar cells is similar to our technology for manufacturing computer chips. They’re built on silicon wafers in clean rooms at high temperatures, and so they’re very, very expensive. But innovation has been dropping that cost tremendously. Over the last 30 years, we’ve gone from a watt of solar power costing $20 to about $1. That’s a factor of 20. We roughly drop the cost of solar by one-half every decade, more or less. That means that, in the sunniest parts of the world today, solar is now basically at parity in cost, without subsidies, with coal and natural gas. Over the next 12–15 years, that will spread to most of the planet. That’s incredibly good news for us. Of course, we don’t just use energy while the Sun is shining. We use energy at night to power our cities; we use energy in things like vehicles that have to move and that have high energy densities. Both of these need storage, and today’s storage is actually a bigger challenge than capturing energy. But there’s reason to believe that we can tackle the storage problem, as well. For example, consider lithium ion batteries—the batteries that are in your laptop, your cell phone, and so on. The demand to have longer-lasting devices drove tremendous innovations in these batteries in the 1990s and the early part of the 2000s. Between 1991 and 2005, the cost of storage in lithium ion batteries dropped by about a factor of nine, and the density of storage—how much energy you can store in an ounce of battery—increased by a little over double in that time. If we do that again, we would be at the point where grid-scale storage is affordable and we can store that energy overnight. Our electric vehicles have ranges similar to the range you can get in a gasoline-powered vehicle. This is a tall order. This represents perhaps tens of billions of dollars in R&D, but it is something that is possible and for which there is precedent. Another approach being taken is turning energy into fuel. When you use a fuel such as gasoline, it’s not really an energy source. It’s an energy carrier, an energy storage system, if you will. You can store a lot of energy in a very small amount. Today, two pioneers in genome sequencing—Craig Venter and George Church—both have founded companies to create next-generation biofuels. What they’re both leveraging is that gene-sequencing cost is the fastest quantitative area of progress on the planet. What they’re trying to do is engineer microorganisms that consume CO2, sunlight, and sugar and actually excrete fuel as a byproduct. If we could do this, maybe just 1% of the Earth’s surface—or a thirtieth of what we use for agriculture—could provide all the liquid fuels that we need. We would conveniently grow algae on saltwater and waste water, so biofuel production wouldn’t compete for freshwater. And the possible yields are vast if we can get there. If we can crack energy, we can crack everything else: • Water. Water is life. We live in a water world, but only about a tenth of a percent of the water in the world is freshwater that’s accessible to us in some way. Ninety-seven percent of the world’s water is in the oceans and is salty. It used to be that desalination meant boiling water and then catching the steam and letting it condense. Between the times of the ancient Greeks and 1960, desalination technology didn’t really change. But then, it did. People started to create membranes modeled on what cells do, which is allow some things through but not others. They used plastics to force water through and get only the fresh and not the salty. As a result, the amount of energy it takes to desalinate a liter of water has dropped by about a factor of nine in that time. Now, in the world’s largest desalination plants, the price of desalinated water is about a tenth of a cent per gallon. The technology has gotten to the point where it is starting to become a realistic option as an alternative to using up scarce freshwater resources. • Food. Can we grow enough food? Between now and 2050, we have to increase food yield by about 70%. Is that possible? I think it is. In industrialized nations, food yields are already twice what they are in the world as a whole. That’s because we have irrigation, tractors, better pesticides, and so on. Given such energy and wealth, we already know that we can grow enough food to feed the planet. Another option that’s probably cheaper would be to leverage some things that nature’s already produced. What most people don’t know is that the yield of corn per acre and in calories is about 70% higher than the yield of wheat. Corn is a C 4 photosynthesis crop: It uses a different way of turning sunlight and CO2 into sugars that evolved only 30 million years ago. Now, scientists around the world are working on taking these C 4 genes from crops like corn and transplanting them into wheat and rice, which could right away increase the yield of those staple grains by more than 50%. Physical limits do exist, but they are extremely distant. We cannot grow exponentially in our physical resource use forever, but that point is still at least centuries in the future. It’s something we have to address eventually, but it’s not a problem that’s pressing right now. • Wealth. One thing that people don’t appreciate very much is that wealth has been decoupling from physical resource use on this planet. Energy use per capita is going up, CO2 emissions per capita have been going up a little bit, but they are both widely outstripped by the amount of wealth that we’re creating. That’s because we can be more efficient in everything—using less energy per unit of food grown, and so on. This again might sound extremely counterintuitive, but let me give you one concrete example of how that happens. Compare the ENIAC—which in the 1940s was the first digital computer ever created—to an iPhone. An iPhone is billions of times smaller, uses billions of times less energy, and has billions of times more computing power than ENIAC. If you tried to create an iPhone using ENIAC technology, it would be a cube a mile on the side, and it would use more electricity than the state of California. And it wouldn’t have access to the Internet, because you’d have to invent that, as well. This is what I mean when I say ideas are the ultimate resource. The difference between an ENIAC and an iPhone is that the iPhone is embodied knowledge that allows you to do more with less resources. That phenomenon is not limited to high tech. It’s everywhere around us. So ideas are the ultimate resource. They’re the only resource that accumulates over time. Our store of knowledge is actually larger than in the past, as opposed to all physical resources. Challenges Ahead for Innovation Today we are seeing a race between our rate of consumption and our rate of innovation, and there are multiple challenges. One challenge is the Darwinian process, survival of the fittest. In areas like green tech, there will be hundreds and even thousands of companies founded, and 99% of them will go under. That is how innovation happens. The other problem is scale. Just as an example, one of the world’s largest solar arrays is at Nellis Air Force Base in California, and we would need about 10 million of these in order to meet the world’s electricity needs. We have the land, we have the solar energy coming in, but there’s a lot of industrial production that has to happen before we get to that point. Innovation is incredibly powerful, but the pace of innovation compared to the pace of consumption is very important. One thing we can do to increase the pace of innovation is to address the biggest challenge, which is market failure. In 1967, you could stick your hand into the Cuyahoga River, in Ohio, and come up covered in muck and oil. At that time, the river was lined with businesses and factories, and for them the river was a free resource. It was cheaper to pump their waste into the river than it was to pay for disposal at some other sort of facility. The river was a commons that anybody could use or abuse, and the waste they were producing was an externality. To that business or factory, there was no cost to pumping waste into this river. But to the people who depended upon the river, there was a high cost overall. That’s what I mean by a market externality and a market failure, because this was an important resource to all of us. But no one owned it, no one bought or sold it, and so it was treated badly in a way that things with a price are not. That ultimately culminated when, in June 1969, a railway car passing on a bridge threw a spark; the spark hit a slick of oil a mile long on the river, and the river burst into flames. The story made the cover of Time magazine. In many ways, the environmental movement was born of this event as much as it was of Rachel Carson’s Silent Spring. In the following three years, the United States created the Environmental Protection Agency and passed the Clean Water and Clean Air acts. Almost every environmental problem on the planet is an issue of the commons, whether it’s chopping down forests that no one owns, draining lakes that no one owns, using up fish in the ocean that no one owns, or polluting the atmosphere because no one owns it, or heating up the planet. They’re all issues of the commons. They’re all issues where there is no cost to an individual entity to deplete something and no cost to overconsume something, but there is a greater cost that’s externalized and pushed on everybody else who shares this. Now let’s come back again to what Limits to Growth said, which was that economic growth always led to more pollution and more consumption, put us beyond limits, and ends with collapse. So if that’s the case, all those things we just talked about should be getting worse. But as the condition of the Cuyahoga River today illustrates, that is not the case. GDP in the United States is three times what it was when the Cuyahoga River caught on fire, so shouldn’t it be more polluted? It’s not. Instead, it’s the cleanest it’s been in decades. That’s not because we stopped growth. It’s because we made intelligent choices about managing that commons. Another example: In the 1970s, we discovered that the ozone layer was thinning to such an extent that it literally could drive the extinction of all land species on Earth. But it’s actually getting better. It’s turned a corner, it’s improving ahead of schedule, and it’s on track to being the healthiest it’s been in a century. That’s because we’ve reduced the emissions of CFCs, which destroy ozone; we’ve dropped the amount of them that we emit into the atmosphere basically to zero. And yet industry has not ground to a halt because of this, either. Economic growth has not faltered. And one last example: Acid rain—which is primarily produced by sulfur dioxide emitted by coal-burning power plants—is mostly gone as an issue. Emissions of sulfur dioxide are down by about a factor of two. That’s in part because we created a strategy called cap and trade: It capped the amount of SO2 that you could emit, then allowed you to swap and buy emission credits from others to find the optimal way to do that. The cost, interestingly enough, has always been lower than projected. In each of these cases, industry has said, This will end things. Ronald Reagan’s chief of staff said the economy would grind to a halt, and the EPA would come in with lower cost estimates. But the EPA has always been wrong: The EPA cost estimate has always been too high. Analysis of all of these efforts in the past shows that reducing emissions is always cheaper than you expect, but cleaning up the mess afterwards is always more expensive than you’d guess. Today, the biggest commons issue is that of climate change, with the CO2 and other greenhouse gases that we’re pumping into the atmosphere. A logical thing to do would be to put a price on these. If you pollute, if you’re pumping CO2 into the atmosphere and it’s warming the planet, so you’re causing harm to other people in a very diffuse way. Therefore, you should be paying in proportion to that harm you’re doing to offset it. But if we do that, won’t that have a massive impact on the economy? This all relates to energy, which drives a huge fraction of the economy. Manufacturing depends on it. Transport depends on it. So wouldn’t it be a huge problem if we were to actually put a price on these carbon emissions? Well, there has been innovative thinking about that, as well. One thing that economists have always told us is that, if you’re going to tax, tax the bad, not the good. Whatever it is that you tax, you will get less of it. So tax the bad, not the good. The model that would be the ideal for putting a price on pollution is what we call a revenue-neutral model. Revenue-neutral carbon tax, revenue-neutral cap and trade. Let’s model it as a tax: Today, a country makes a certain amount of revenue for its government in income tax, let’s say. If you want to tax pollution, the way to do this without impacting the economy is to increase your pollution tax in the same manner that you decrease the income tax. The government then is capturing the same amount of money from the economy as a whole, so there’s no economic slowdown as a result of this. This has a positive effect on the environment because it tips the scales of price. Now, if you’re shopping for energy, and you’re looking at solar versus coal or natural gas, the carbon price has increased the price of coal and natural gas to you, but not the cost of solar. It shifts customer behavior from one to the other while having no net impact on the economy, and probably a net benefit on the economy in the long run as more investment in green energy drives the price down. Toward a Wealthier, Cleaner Future The number-one thing I want you to take away is that pollution and overconsumption are not inevitable outcomes of growth. While tripling the wealth of North America, for instance, we’ve gone from an ozone layer that was rapidly deteriorating to one that is bouncing back. The fundamental issue is not one of limits to growth; it’s one of the policy we choose, and it’s one of how we structure our economy to value all the things we depend upon and not just those things that are owned privately. What can we do, each of us? Four things: First is to communicate. These issues are divisive, but we know that beliefs and attitudes on issues like this spread word of mouth. They spread person to person, from person you trust to person you trust. So talk about it. Many of us have friends or colleagues or family on the other side of these issues, but talk about it. You’re better able to persuade them than anyone else is. Second is to participate. By that I mean politically. Local governments, state and province governments, and national governments are responsive when they hear from their constituents about these issues. It changes their attitudes. Because so few constituents actually make a call to the office of their legislator, or write a letter, a few can make a very large impact. Third is to innovate. These problems aren’t solved yet. We don’t have the technologies for these problems today. The trend lines look very good, but the next 10 years of those trend lines demand lots of bright people, lots of bright ideas, and lots of R&D. So if you’re thinking about a career change, or if you know any young people trying to figure out what their career is now, these are careers that (A) will be very important to us in the future and (B) will probably be quite lucrative for them.

### 2

#### Permissibility and presumption negate – [a] the resolution indicates the aff has to prove an obligation, and permissibility would deny the existence of an obligation [b] Statements are more often false than true because any part can be false. This means you negate if there is no offense because the resolution is probably false.

#### Ethics must begin a priori:

#### [1] Uncertainty – our experiences are inaccessible to others which allows people to say they don’t experience the same, however a priori principles are universally applied to all agents.

#### [2] Bindingness – I can keep asking “why should I follow this” which results in skep since obligations are predicated on ignorantly accepting rules. Only reason solves since asking “why reason?” requires reason which concedes its authority and equally proves agency as constitutive

#### That means we must universally will maxims— any non-universalizable norm justifies someone’s ability to impede on your ends.

#### Thus, the standard is consistency with the categorical imperative.

#### Prefer the standard: [a] freedom is the key to the process of justification of arguments. Willing that we should abide by their ethical theory presupposes that we own ourselves in the first place. Thus, it is logically incoherent to justify the neg arguments/standard without first willing that we can pursue ends free from others [b] Frameworks are topicality interps of the word ought so they should be theoretically justified. Prefer on resource disparities—a focus on evidence and statistics privileges debaters with the most preround prep which excludes lone-wolfs who lack huge evidence files. A debate under my framework can easily be won without any prep since huge evidence files aren’t required.

#### 1] Intellectual property is an inalienable personal right of economic use

**Pozzo 6** Pozzo, Riccardo. “Immanuel Kant on Intellectual Property.” Trans/Form/Ação, vol. 29, no. 2, 2006, pp. 11–18., doi:10.1590/s0101-31732006000200002. SJ//DA recut SJKS recut Cookie JX

Corpus mysticum, opus mysticum, propriété incorporelle, proprietà letteraria, geistiges Eigentum. All these terms mean **intellectual property, the existence of which is intuitively clear because of the unbreakable bond that ties the work to its creator.** The book belongs to whomever has written it, the picture to whomever has painted it, the sculpture to whomever has sculpted it; and this independently from the number of exemplars of the book or of the work of art in their passages from owner to owner. The initial bond cannot change and it ensures the author authority on the work. Kant writes in section 31/II of the Metaphysics of Morals: “Why does unauthorized publishing, which strikes one even at first glance as unjust, still have an appearance of being rightful? Because on the one hand a book is a corporeal artifact (opus mechanicum) that can be reproduced (by someone in legitimate possession of a copy of it), so that there is a right to a thing with regard to it. On the other hand a book is also a mere discourse of the publisher to the public, which the publisher may not repeat publicly without having a mandate from the author to do so (praestatio operae), and this is a right against a person. The error consists in mistaking one of these rights for the other” (Kant, 1902, t.6, p.290). The corpus mysticum, **the work considered as an immaterial good, remains property of the author on behalf of the original right of its creation. The corpus mechanicum consists of the exemplars of the book or of the work of art. It becomes the property of whoever has bought the material object in which the work has been reproduced or expressed.** Seneca points out in De beneficiis (VII, 6) the difference between owning a thing and owning its use. He tells us that the bookseller Dorus had the habit of calling Cicero’s books his own, while there are people who claim books their own because they have written them and other people that do the same because they have bought them. Seneca concludes that the books can be correctly said to belong to both, for it is true they belong to both, but in a different way **The peculiarity of intellectual property consists thus first in being indeed a property, but property of an action; and second in being indeed inalienable, but also transferable in commission and license to a publisher. The bond the author has on his work confers him a moral right that is indeed a personal right. It is also a right to exploit economically his work in all possible ways, a right of economic use, which is a patrimonial right. Kant and Fichte argued that moral right and the right of economic use are strictly connected, and that the offense to one implies inevitably offense to the other.** In eighteenth-century Germany, the free use came into discussion among the presuppositions of a democratic renewal of state and society. In his Supplement to the Consideration of Publishing and Its Rights, Reimarus asked writers “instead of writing for the aristocracy, to write for the tiers état of the reader’s world.” (Reimarus, 1791b, p.595). **He saluted with enthusiasm the claim of disenfranchising from the monopoly of English publishers expressed in the American Act for the Encouragement of Learning of May 31, 1790. Kant, however, was firm in embracing intellectual property. Referring himself to Roman Law, he asked for its legislative formulation not only as patrimonial right, but also as a personal right.** In Of the Illegitimity of Pirate Publishing, he considered the moral faculties related to **intellectual property as an “inalienable right (ius personalissimum) always himself to speak through anyone else, the right, that is, that no one may deliver the same speech to the public other than in his (the author’s) name”** (Kant, 1902, t.8, p.85). Fichte went farther in the Demonstration of the Illegitimity of Pirate Publishing. **He saw intellectual property as a part of his metaphysical construction of intellectual activity, which was based on the principle that thoughts “are not transmitted hand to hand, they are not paid with shining cash, neither are they transmitted to us if we take home the book that contains them and put it into our library.** In order to make those thoughts our own an action is still missing: we must read the book, meditate – provided it is not completely trivial – on its content, consider it under different aspects and eventually accept it within our connections of ideas” (Fichte, 1964, t.I/1, p.411). At the center of the discussion was the practice of reprinting books in a pirate edition after having them reset word after words after an exemplar of the original edition. Given Germany’s division in a myriad of small states, the imperial privilege was ineffective against pirate publishing. Kant and Fichte spoke for the acceptance of the right to defend the work of an author by the usurpations of others so that he may receive a patrimonial advantage from those who utilize the work acquiring new knowledge and/or an aesthetic experience. In particular, Fichte declared the absolute primacy of the moral faculties within the corpus mysticum. He divided the latter into a formal and a material part. “This intellectual element must be divided anew into what is material, the content of the book, the thoughts it presents; and the form of these thoughts, the manner in which, the connection in which, the formulations and the words by means of which the book presents them” (Fichte, 1964, t.I/1, p.411). Fichte’s underlining the author’s exclusive right to the intellectual content of his book – “the appropriation of which through another is physically impossible” (ibid.) – brought him to the extreme of prohibiting any form of copy that is not meant for personal use. In Publishing Considered anew, Reimarus considered on the contrary copyright in its patrimonial aspects as a limitation to free trade: “What would not happen were a universal protection against pirate publishing guaranteed? Monopoly and safer sales certainly do not procure convenient price; on the contrary, they are at the origin of great abuses. The only condition for convenient price is free-trade, and one cannot help noticing that upon the appearance of a private edition, publishers are forced to substantially lower the price of a book” (Reimarus, 1791a, pp.402-3). Reimarus admitted of being unable to argue in terms of justice. Justice was of no bearing, he said, for whom, like himself, considered undemonstrated the author’s permanent property of his work (herein supported by the legislative vacuum of those years). What mattered, he said, was equity. In sum, Reimarus anticipated today’s stance on free use by referring to the principle that public interest on knowledge ought to prevail on the author’s interest and to balance the copyright. Moreover, Reimarus extended his argument beyond the realm of literary production to embrace, among others, the today vital issue of pharmaceutical production on patented receipts. “Let us suppose that at some place a detailed description for the preparation of a good medicine or of any other useful thing be published, why may not somebody who lives in places that are far away from that one copy it to use it for his own profit and but must instead ask the original publisher for the issue of each exemplar?” (Reimarus, 1791b, t.2, pp.584). To sum up, Reimarus’s stance does not seem respondent to rule of law. For in all dubious case the general rule ought to prevail, fighting intellectual property with anti-monopolistic arguments in favor of free trade brings with itself consequences that are not tranquilizing also for the ones that are expected to apply the law. **By resetting literary texts, one could obviously expurgate some errors. More frequently, however, some were added, given the exclusively commercial objectives of the reprints. The valid principle was, thus, that reprints were less precise than original editions, but they were much cheaper for the simple reason that the pirate publisher had a merely moral obligation against the author and the original publisher. In fact, he was not held to pay any honorarium to the author upon handling over the manuscript, nor to paying him royalties, nor to pay anything to the original publisher. The** only expense in charge of the pirate publisher was buying the exemplar of the original edition out of which he was to make, as we say today, a free use.

#### 2]The aff violates the categorical imperative and is non-universalizable- governments have a binding obligation to protect creations

**Van Dyke 18** Raymond Van Dyke, 7-17-2018, "The Categorical Imperative for Innovation and Patenting," IPWatchdog, <https://www.ipwatchdog.com/2018/07/17/categorical-imperative-innovation-patenting/id=99178/> SJ//DA recut SJKS

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.

#### IPs are a necessary check on companies free-riding off associations of quality. that treats people as ­means to an end and takes advantage of their efforts which violates the principle of humanity

Wong et al 20 [Liana, Ian, and Shayerah; Analyst in International Trade and Finance; Specialist in International Trade and Finance; Specialist in International Trade and Finance; “Intellectual Property Rights and International Trade,” \*Updated\* 5/12/20; CRS; <https://www.everycrsreport.com/files/20200512_RL34292_2023354cc06b0a4425a2c5e02c0b13024426d206.pdf>] Justin

Trademark protection in the United States is governed jointly by state and federal law. The main federal statute is the Lanham Act of 1946 (Title 15 of the United States Code). Trademarks permit the seller to use a distinctive word, name, symbol, or device to identify and market a product or company. Marks can also be used to denote services from a particularly company. The trademark allows quick identification of the source of a product, and for good or ill, can become an indicator of a product's quality. If for good, the trademark can be valuable by conveying an instant assurance of quality to consumers. Trademark law serves to prevent other companies with similar merchandise from free-riding on the association of quality with the trademarked item. Thus, a trademarked good may command a premium in the marketplace because of its reputation. To be eligible for a trademark, the words or symbol used by the business must be sufficiently distinctive; generic names of commodities, for example, cannot be trademarked. Trademark rights are acquired through use or through registration with the PTO.

A related concept to trademarks is geographical indications (GIs), which are also protected by the Lanham Act. The GI acts to protect the quality and reputation of a distinctive product originating in a certain region; however, the benefit does not accrue to a sole producer, but rather the producers of a product originating from a particular region. GIs are generally sought for agricultural products, or wines and spirits. Protection for GIs is acquired in the United States by registration with the PTO, through a process similar to trademark registration.

### 3

#### CP text: The member nations of the WTO should:

#### ---Loan an additional 4 billion dollars of additional funding to close the pre-purchase gap of 350 million vaccines to achieve world-wide immunity

#### ---The World Bank should relax the conditions to receive a loan as per Goldberg 21

#### ---Eliminate export restriction on critical medicines during pandemics.

#### The CP solves pandemics better – the aff misidentifies the problem.

Goldberg 20 [PINELOPI KOUJIANOU; Former World Bank Group chief economist and editor-in-chief of the American Economic Review, Professor of Economics at Yale University; “Forget the Vaccine Patent Waiver,” Project Syndicate; 5/13/21; <https://www.project-syndicate.org/commentary/wto-vaccine-waiver-is-beside-the-point-by-pinelopi-koujianou-goldberg-2021-05>] Justin

What’s the issue, then? According to Agarwal and Reed, it is that companies are reluctant to activate their existing production capacity without pre-purchase commitments. There is currently a large gap between the number of doses that could be produced and the number that have been pre-ordered. And, as one would expect, this gap is unevenly distributed. High-income countries have ordered more doses than they need and thus will end up with a surplus, whereas lower-income countries are far behind in pre-purchasing vaccines.

Under these circumstances, efforts to increase capacity by relaxing patent protections would do nothing to accelerate vaccinations in lower-income countries. A far more promising strategy is to help lower-income countries purchase vaccines, while channeling surplus doses from richer countries to wherever they are needed most.

To a large extent, this strategy is already being implemented, thanks to the efforts of the COVAX Advanced Market Commitment facility, together with concessional loans by multilateral institutions such as the World Bank, and regional initiatives such as the one being led by the African Union. Remarkably, Agarwal and Reed show that the COVAX AMC facility and the AU initiative already have ensured that most African countries have ordered enough vaccines to cover at least 50% of their populations.

Still, three critical challenges remain. First, closing the pre-purchase gap of 350 million vaccines will requires an additional $4 billion – a trivial cost relative to the potential benefit of achieving worldwide immunity. Providing this support, either through additional funding for the COVAX AMC facility or by sending surplus vaccines to developing countries as soon as possible, should not be too difficult or costly for high-income countries to manage.

Second, the World Bank needs to relax its conditions for extending loans for vaccine pre-purchases. Currently, such loans can be used only for vaccines approved by three stringent regulatory authorities (SRAs) in three different regions. Among these are Japan and certain Western countries, which naturally prioritize approval of vaccines intended for their own populations. They have little incentive to grant emergency-use authorization to alternative vaccines that have shown high efficacy in Phase 3 clinical trials, such as Bharat Biotech’s Covaxin (India), and Gamaleya’s Sputnik V (Russia), and Sinovac Biotech’s CoronaVac (China). Extending the list of national regulators classified as SRAs would go a long way toward increasing lending for vaccine purchases.1

Finally, existing vaccine manufacturers will be unable to meet their production targets if vaccine nationalism gives rise to export restrictions on critical inputs and raw materials. We saw such behavior early in the pandemic with respect to personal protective equipment, but the resulting export restrictions proved short-lived. One hopes the same will be true for vaccines. International cooperation and coordination will be crucial in the coming months.

There are many ways for advanced economies to assist poorer countries in vaccinating their populations as soon as possible. But relaxing patent protections – however appealing the idea may be in other contexts – is not one of them. The focus should be on providing additional funding and less restrictive lending for pre-ordering vaccines, and on funneling surpluses from high-income countries to the rest of the world.

### 4

#### Interpretation: “medicines” is a generic bare plural. The aff may not defend that member nations of the World Trade Organization ought to reduce intellectual property protections for a medicine or subset of medicines.

Nebel 19. [Jake Nebel is an assistant professor of philosophy at the University of Southern California and executive director of Victory Briefs. He writes a lot of this stuff lol – duh.] “Genericity on the Standardized Tests Resolution.” Vbriefly. August 12, 2019. <https://www.vbriefly.com/2019/08/12/genericity-on-the-standardized-tests-resolution/?fbclid=IwAR0hUkKdDzHWrNeqEVI7m59pwsnmqLl490n4uRLQTe7bWmWDO_avWCNzi14> TG

Both distinctions are important. Generic resolutions can’t be affirmed by specifying particular instances. But, since generics tolerate exceptions, plan-inclusive counterplans (PICs) do not negate generic resolutions.

Bare plurals are typically used to express generic generalizations. But there are two important things to keep in mind. First, generic generalizations are also often expressed via other means (e.g., definite singulars, indefinite singulars, and bare singulars). Second, and more importantly for present purposes, bare plurals can also be used to express existential generalizations. For example, “Birds are singing outside my window” is true just in case there are some birds singing outside my window; it doesn’t require birds in general to be singing outside my window.

So, what about “colleges and universities,” “standardized tests,” and “undergraduate admissions decisions”? Are they generic or existential bare plurals? On other topics I have taken great pains to point out that their bare plurals are generic—because, well, they are. On this topic, though, I think the answer is a bit more nuanced. Let’s see why.

“Colleges and universities” is a generic bare plural. I don’t think this claim should require any argument, when you think about it, but here are a few reasons.

First, ask yourself, honestly, whether the following speech sounds good to you: “Eight colleges and universities—namely, those in the Ivy League—ought not consider standardized tests in undergraduate admissions decisions. Maybe other colleges and universities ought to consider them, but not the Ivies. Therefore, in the United States, colleges and universities ought not consider standardized tests in undergraduate admissions decisions.” That is obviously not a valid argument: the conclusion does not follow. Anyone who sincerely believes that it is valid argument is, to be charitable, deeply confused. But the inference above would be good if “colleges and universities” in the resolution were existential. By way of contrast: “Eight birds are singing outside my window. Maybe lots of birds aren’t singing outside my window, but eight birds are. Therefore, birds are singing outside my window.” Since the bare plural “birds” in the conclusion gets an existential reading, the conclusion follows from the premise that eight birds are singing outside my window: “eight” entails “some.” If the resolution were existential with respect to “colleges and universities,” then the Ivy League argument above would be a valid inference. Since it’s not a valid inference, “colleges and universities” must be a generic bare plural.

Second, “colleges and universities” fails the [upward-entailment test](https://plato.stanford.edu/entries/generics/#IsolGeneInte) for existential uses of bare plurals. Consider the sentence, “Lima beans are on my plate.” This sentence expresses an existential statement that is true just in case there are some lima beans on my plate. One test of this is that it entails the more general sentence, “Beans are on my plate.” Now consider the sentence, “Colleges and universities ought not consider the SAT.” (To isolate “colleges and universities,” I’ve eliminated the other bare plurals in the resolution; it cannot plausibly be generic in the isolated case but existential in the resolution.) This sentence does not entail the more general statement that educational institutions ought not consider the SAT. This shows that “colleges and universities” is generic, because it fails the upward-entailment test for existential bare plurals.

Third, “colleges and universities” fails the adverb of quantification test for existential bare plurals. Consider the sentence, “Dogs are barking outside my window.” This sentence expresses an existential statement that is true just in case there are some dogs barking outside my window. One test of this appeals to the drastic change of meaning caused by inserting any adverb of quantification (e.g., always, sometimes, generally, often, seldom, never, ever). You cannot add any such adverb into the sentence without drastically changing its meaning. To apply this test to the resolution, let’s again isolate the bare plural subject: “Colleges and universities ought not consider the SAT.” Adding generally (“Colleges and universitiesz generally ought not consider the SAT”) or ever (“Colleges and universities ought not ever consider the SAT”) result in comparatively minor changes of meaning. (Note that this test doesn’t require there to be no change of meaning and doesn’t have to work for every adverb of quantification.) This strongly suggests what we already know: that “colleges and universities” is generic rather than existential in the resolution.

#### It applies to “medicines” – 1] upward entailment test – “member nations of the World Trade Organization ought to reduce intellectual property protections for medicines” doesn’t entail that member nations of the WTO ought to reduce IPP for drugs because it doesn’t prove that marijuana protections should be reduced 2] adverb test – adding “always” to the res doesn’t substantially change its meaning because reduce is permanent.

#### Violation: They spec \_\_\_\_\_\_

#### Standards:

#### [1] precision – the counter-interp justifies them arbitrarily doing away with random words in the resolution which decks negative ground and preparation because the aff is no longer bounded by the resolution. Independent voter for jurisdiction – the judge doesn’t have the jurisdiction to vote aff if there wasn’t a legitimate aff.

#### [2] Limits and ground – their model allows affs to defend anything from Covid vaccines to HIV drugs to Insulin— there's no universal DA since each has different functions and political implications — that explodes neg prep and leads to random medicine of the week affs which makes cutting stable neg links impossible — limits key to reciprocal engagement since they create a caselist for neg prep and it takes out ground like DAs to certain medicines which are some of the few neg generics when affs spec medicines.

#### [3] TVA solves – you could’ve read your plan as an advantage under a whole res advocacy.

#### Fairness – debate is a competitive activity that requires fairness for objective evaluation. Outweighs because it’s the only intrinsic part of debate – all other rules can be debated over but rely on some conception of fairness to be justified.

#### Drop the debater – a] deter future abuse and b] set better norms for debate.

#### Competing interps – [a] reasonability is arbitrary and encourages judge intervention since there’s no clear norm, [b] it creates a race to the top where we create the best possible norms for debate.

#### No RVIs – a] illogical, you don’t win for proving that you meet the burden of being fair, logic outweighs since it’s a prerequisite for evaluating any other argument, b] RVIs incentivize baiting theory and prepping it out which leads to maximally abusive practices

### Case

#### Consequences Fail: a] Every action has infinite stemming consequences, because every consequence can cause another consequence so we can’t predict. b] Induction is circular because it relies on the assumption that nature will hold uniform and we could only reach that conclusion through inductive reasoning based on observation of past events. c] Every action is infinitely divisible, only intents unify because we commit the end point of an action – but consequences cannot determine what step of action is moral d] Yes act/omission distinction – there are infinite events occurring over which you have no control, so you can never be moral

#### The WTO can’t enforce the aff- causes circumvention.

Lamp 19 [Nicholas; Assistant Professor of Law at Queen’s University; “What Just Happened at the WTO? Everything You Need to Know, Brink News,” 12/16/19; <https://www.brinknews.com/what-just-happened-at-the-wto-everything-you-need-to-know/>] Justin

Nicolas Lamp: For the first time since the establishment of the WTO in 1995, the Appellate Body cannot accept any new appeals, and that has knock-on effects on the whole global trade dispute settlement system. When a member appeals a WTO panel report, it goes to the Appellate Body, but if there is no Appellate Body, it means that that panel report will not become binding and will not attain legal force.

The absence of the Appellate Body means that members can now effectively block the dispute settlement proceedings by what has been called appealing panel reports “into the void.”

The WTO panels will continue to function as normal. When a panel issues a report, it will normally be automatically adopted — unless it is appealed. And so, even though the panel is working, the respondent in a dispute now has the option of blocking the adoption of the panel’s report. It can, thereby, shield itself from the legal consequences of a report that finds that the member has acted inconsistently with its WTO obligations.

#### Aff fails---trade secrets remain secrets and existing logistical hubs fail.

Banri Ito 21 [(Professor of Economics, Aoyama Gakuin University; Fellow, RIETI), 8/8/21, Impacts of the vaccine intellectual property rights waiver on global supply, <https://voxeu.org/article/impacts-vaccine-intellectual-property-rights-waiver-global-supply>] Justin

Regarding waivers of vaccine patents, there have been some voluntary initiatives. On 8 October, soon after South Africa and India proposed a waiver of the TRIPS agreement on 2 October 2020, Moderna, a US pharmaceutical company, expressed its intention not to exercise its patent rights on its COVID-19 vaccine.1 Although Moderna reached an agreement with South Korean pharmaceutical company Samsung Biologics on consignment production of the vaccine on 22 May 2021, so far there have been very few confirmed cases of efforts to reproduce Moderna's vaccine or of licenses being granted to other companies.

With respect to the COVID-19 vaccines developed by Pfizer (jointly with BioNTech of Germany) and Moderna, it appears that the whole body of relevant technical knowledge has not necessarily been patented but that some of the technical knowledge remains undisclosed as trade secrets. Patenting is only one means of ensuring ‘appropriability’, which refers to a company's capacity to secure profits from its own technological innovation. While patent information may make it possible for outsiders to achieve development results similar to those achieved by the patented technology through a similar method without infringing the patent right, keeping the technology undisclosed as a trade secret or incorporating complex processes into it may be an effective means of ensuring appropriability. Pharmaceuticals can easily be counterfeited through ‘reverse engineering’, which refers to a process in which the active ingredients of a drug are identified as a result of deformulation. Therefore, as a general rule, it is considered important to exclude the risk of counterfeiting through patenting.

While it is not clear how much of the relevant technological knowledge remains unpatented, there are apparently some technical reasons for not obtaining full patent protection. The Pfizer and Moderna vaccines use advanced technology based on messenger RNA (mRNA), representing the first case of practical application of such technology. Although I, a non-expert in this field, will refrain from going into further detail, it is highly likely that those vaccines cannot easily be counterfeited as their production requires complex production processes and unique technology.

Patenting involves public disclosure of technical knowledge, providing information on how to reproduce patented inventions. It has the function of lowering technology trade costs by clarifying property rights on technical knowledge. If the technical knowledge necessary for manufacturing a certain product remains undisclosed as a trade secret, it may not be recorded in a written or other tangible form, and it may become necessary to pass down the technical information as cumulative implicit knowledge. As a result, technology transfer may become difficult.

Perhaps in view of that risk, in April 2021, the World Health Organization (WHO) established a COVID-19 vaccine technology transfer hub as a scheme to promote the sharing of mRNA-based technology. However, there are no media reports to date indicating that technical knowledge has been provided through this scheme.2

#### The aff causes a scramble for limited resources by manufacturers with no experience – turns case.

Breuninger 21 [Kevin; Specialist at CNBC; “Pfizer CEO opposes U.S. call to waive Covid vaccine patents, cites manufacturing and safety issues,” CNBC; 5/7/21; <https://www.cnbc.com/2021/05/07/pfizer-ceo-biden-backed-covid-vaccine-patent-waiver-will-cause-problems.html>] Justin

“Currently, infrastructure is not the bottleneck for us manufacturing faster,” Bourla wrote in a dear colleague letter posted on LinkedIn. “The restriction is the scarcity of highly specialized raw materials needed to produce our vaccine.”

Pfizer’s vaccine requires 280 different materials and components that are sourced from 19 countries around the world, Bourla said. He contended that without patent protections, entities with much less experienced than Pfizer at manufacturing vaccines will start competing for the same ingredients.

“Right now, virtually every single gram of raw material produced is shipped immediately into our manufacturing facilities and is converted immediately and reliably to vaccines that are shipped immediately around the world,” Bourla wrote.

He predicted that the proposed waiver “threatens to disrupt the flow of raw materials.”

“It will unleash a scramble for the critical inputs we require in order to make a safe and effective vaccine,” Bourla wrote.

“Entities with little or no experience in manufacturing vaccines are likely to chase the very raw materials we require to scale our production, putting the safety and security of all at risk,” the CEO wrote.

#### Prevents distribution---causes vaccine hesitancy.

Newey et al 21 [Sarah Newey*;* Anne Gulland*;* Jennifer Rigby, (GLOBAL HEALTH SECURITY CORRESPONDENTS at the telegraph) *and* Samaan Lateef (Reporting IN INDIA) 6/1/21, Vaccinating the world: the obstacles hindering global rollout – and how to overcome them, Telegraph, <https://www.telegraph.co.uk/global-health/science-and-disease/vaccinating-the-world/>] Justin

[Vaccine hesitancy has also reared its head](https://www.telegraph.co.uk/global-health/science-and-disease/hesitancy-hard-wired-us-indulge-now-peril/), with concerns around rare blood clots linked to the AstraZeneca and J&J vaccines hitting public confidence in Africa. The Democratic Republic of Congo sent 1.3m unwanted doses to countries including Togo and Senegal before they expired in late June, while Malawi destroyed 20,000 unused shots last month as hesitancy hit rollout. “There were some assumptions in the public health community that this is such a bad pandemic... that this will change people’s minds if they were ever hesitant about vaccines,” Prof Heidi Larson, director of the Vaccine Confidence Project, told a Devex event. “Well, it hasn’t really – in fact, the groups and the questioning around vaccines and some of the anti sentiments have actually escalated.” There are also growing concerns that the AstraZeneca and J&J vaccines may be viewed as the “cheap relation” compared to the new mRNA vaccines produced by Pfizer and Moderna. Given the former make up the bulk of Covax’s supply and are far easier to distribute in the developing world, this is a substantial hurdle. “The AstraZeneca row has significantly impacted confidence – not just across Africa, but around the world,” says Dr Ayoade Alakija, co-chair of the Africa Union Vaccine Delivery Alliance. “But there is no choice here [to pick a different vaccine].” However, back in Kumasi, Mr Nyarko says it is supply rather than confidence that is currently undermining his district’s roll out. And with no clear picture on when more shots will arrive, he’s left with few options. “All we can do for now is pray that Ghana can secure another batch,” he says. “We are praying that the UK and Europe will help us.

#### Patents can’t solve the vaccine problem- they don’t have enough info and manufacturers shield key replication information

Santos Rutschman 21 Santos Rutschman, Ana (Professor of Law, St. Louis University) and Julia Barnes-Weise (Executive Director of the Global Healthcare Innovation Alliances Accelerator a non-profit organization spun out of a program in Public Policy at Duke University, and a Senior Consultant to the Coalition for Epidemic Preparedness Innovations. She is a lawyer, global health policy consultant, entrepreneur and Certified Licensing Professional). "The COVID-19 Vaccine Patent Waiver: The Wrong Tool for the Right Goal." Bill of Health (2021) (2021)./SJKS

In order to understand the practical limitations of a waiver of intellectual property rights when a vaccine is involved, it may be useful to think of patents as informational mechanisms akin to the information and tools needed to turn a recipe into an edible product. One or more patents will provide a recipe for a process or a component needed to produce a vaccine. But, just as with a culinary recipe, the informational power of a patent does not cover any tips or instructions that have not been memorialized in writing, nor does it provide any access to the raw materials needed to put a vaccine together. Waivers, therefore, temporarily remove exclusionary rights, but do not address two fundamental sources of the current vaccine scarcity problem. First, we are still left with a significant informational problem: as many [commentators](https://science.sciencemag.org/content/369/6506/912) have remarked, knowledge disclosed through patents alone is often insufficient for a third party to actually be able to replicate a vaccine. From a scientific perspective, vaccines are biological products, and, as such, their relative complexity makes them highly dependent on specific manufacturing processes and practices, many of which are not disclosed in a patent — think of it as the unwritten tips or instructions for a particular recipe. Some of this information may be kept secret by a company for competitive reasons; in these cases, lifting patent rights will not result in increased informational disclosure, unless the patent holders themselves are willing to collaborate. A waiver thus solves the exclusivity problem, but not the information problem that undergirds competition in vaccine manufacturing. To revisit the analogy introduced above, a waiver allows third parties to freely use the recipe. It does not, however, provide all the information that may be needed to manufacture the desired good, nor does it provide manufacturers with the tacit knowledge that only the original manufacturer possesses and is not disclosed elsewhere.

#### The aff can’t solve – but creates low-quality vaccines and discourages investment in critical areas.

CPIP 21 [Center for Intellectual Property x Innovation Policy; “A View from Both Sides: COVID-19, the TRIPS Waiver, IP Rights, and How to Increase the Supply of Vaccines,” Antonin Scalia Law School / George Mason University; 6/22/21; <https://cip2.gmu.edu/2021/06/22/a-view-from-both-sides-covid-19-the-trips-waiver-ip-rights-and-how-to-increase-the-supply-of-vaccines/>] Justin

A waiver on patent rights, even with the corresponding trade secrets, can only give permission to manufacture. But Eva Bishwal of Fidus Law Chambers writes that the real problems in India “are state inaction, dearth of raw materials and low production capacity.”

According to Patrick Kilbride of the U.S. Chamber of Commerce’s Global Innovation Policy Center, and as cited in Pharmaceutical Technology, “[p]roposals to waive intellectual property rights are misguided and a distraction from the real work of reinforcing supply chains and assisting countries to procure, distribute and administer vaccines to billions of the world’s citizens.”

Low-quality vaccines could do more harm than good

Former USPTO Director Andrei Iancu voiced concern recently at a World IP Day event, asking, “if we waive IP rights, and exclude the original manufacturers, how are we going to control the quality of the vaccines that go into people’s arms? How are we going to control for the fake vaccines? Just last week we saw fake Pfizer vaccines.” And as Philip Thompson points out for IPWatchdog, when investigators are forced to “determine if adverse events or sub-par effectiveness originate from ‘real’ vaccines or fake doses, we should expect global production starts and stops to become much more frequent.”

It will discourage investment in the most critical areas

Pharmaceutical developers invest unfathomable amounts of money into bringing drugs to market. The path to success is long, expensive, and highly uncertain. But what is certain is that successful drugs can yield a profit that covers the loss from failures. Now critics are deeply worried that this waiver will skew future cost-benefit analyses against important classes of medicine. All other things being equal, a developer has a better chance at a positive return by investing in drugs that pose no risk of seizure during a global emergency. As Amanda Glassman of the Center for Global Development writes, the waiver sends the wrong message to innovators and investors: “don’t bother attacking the most important global problems; instead, throw your investment dollars at the next treatment for erectile disfunction, which will surely earn you a steady return with far less agita.” The scramble amongst pharmaceutical giants to develop a vaccine was an all-out race, with good reason, and that’s exactly how it should be. If those companies believe that forfeiture is waiting at the finish line next time around, we might see fewer contestants.

### 1NC – AT: WTO Legitimacy

#### 1] No brink identified- view it as a linear advantage which means the DA o/w on timeframe

#### 2] Other policies solve- i.e the fishing subsidies negotiations

#### 3] UN evidence is shit- there’s no warrant for why legitimacy is key just trade overall

#### 4] Liquidity DA solves the advantage- growth from squo leads to robust trade and o/w

#### 5] Waiver wasn’t started by the WTO which means there’s no credibility gained, and normal means is through domestic law- the WTO is kinda useless

#### 6] Any reason the aff is a bad idea kills perceptions and tanks legitimacy