### Buyout cp

#### CP Text: The United States should buy COVID-19 vaccine patents from American companies and release them into the public domain as described by Watney -- solves the aff and avoids the link to innovation

Caleb **Watney 6/15** [Caleb Watney is Director of Innovation Policy at PPI. "A Marshall Plan to Solve the Global Vaccine Shortfall" A16Z, June 15, 2021 https://future.a16z.com/marshall-plan-to-solve-global-vaccine-shortfall/]

The economist Michael Kremer wrote a paper in 1997 formalizing the idea of using patent buyouts as a way of maintaining strong incentives for innovation, while still getting crucial information into the public domain as soon as possible. Essentially, a government could offer to pay the present value of the expected future revenue stream that would result from the temporary monopoly that a patent sometimes grants. While the patent-owning company or individual should be indifferent to the outcome, the general public could receive more value from having unabridged access to the information and the ability to modify it without permission before the patent expired. In these cases, a patent buyout can clearly improve outcomes for everyone, and Kremer notes that pharmaceuticals may be a particularly appropriate case. Patent buyouts maximize the number of players that can legally produce vaccines while maintaining strong incentives for future innovation. Of course, in this situation it’s only partly about the intellectual property, and partly about the manufacturing know-how that has to be transferred, which means we need a broader conception here — a more full-stack “technology buyout” that includes both the IP and the process knowledge transfer. Essentially, the U.S. government (or even a set of governments) could offer a lump sum payment to the accepting firm(s) to make explicit the scientific and production process as much as possible and then also make it publicly available. We could offer a secondary payment for sharing on-the-ground technical expertise to aid in setting up manufacturing operations — either on an individual factory level, or on the basis of vaccine doses administered. A per-vaccine-dose-administered basis properly aligns incentives for the firm(s) sharing technology, maximizing their impact by transferring to partners that can actually get shots into arms as quickly as possible and to make sure they do a good job. To put some back-of-the-envelope numbers on this, the initial lump sum payment to make the IP public would be in the range of $10-20 billion per firm, and the additional per-dose-administered prize would be in the realm of $0.50-$2. Assuming this program was able to administer vaccines for an additional 4 billion people (8 billion doses) across the developing world, we are talking in the range of $36-56 billion. And we should overpay. In a situation like this, we should err on the side of overcompensating, and risking some economic rents, rather than inadvertently undercompensating and hurting the long-term incentives for innovation. The key is to not kill the goose that lays the golden egg. In any event, we should be willing to pay an order of magnitude more than $36 billion to definitively end COVID, so this program is a bargain under a wide range of potential cost assumptions. One estimate from a group of economists and public health officials ballpark the global monthly cost of the pandemic at around $1 trillion per month.

#### Competes: it's mutually exclusive and uses a different mechanism than the aff. It's impossible to simultaneously purchase IP rights and also waive them because if they're waived no one can buy them

#### A buyout is preferable to IP suspension -- speed and incentive to innovate -- solves future variants which turns case.

Caleb **Watney 6/15** [Caleb Watney is Director of Innovation Policy at PPI. "A Marshall Plan to Solve the Global Vaccine Shortfall" A16Z, June 15, 2021 https://future.a16z.com/marshall-plan-to-solve-global-vaccine-shortfall/]

#### A buyout also presents several key advantages when compared to IP suspension as well, even putting the incentive issues aside: First, speed. Even with the U.S. reversing course and supporting the WTO proposal, it will take quite a bit of time to negotiate and wrangle all the other countries to the table. Remember, the proposal has to be supported unanimously, so there is no guarantee that all other opposed nations will reverse course just because the U.S. did. A buyout, in contrast, can be done unilaterally by the U.S. (at least for the U.S.-based vaccine firms). Second, in the unfortunate event that a new variant requires a booster shot, a buyout ensures the incentive to quickly create a solution so that the new booster shot can also get bought out. Under the WTO petition, the IP suspension would remain in play for the duration of the crisis, which would reduce the urgency and resources pharma companies are willing to throw at the problem, given fewer opportunities to recoup their costs.

#### US soft power is key to maintaining US heg – turns case

**Thomas 18** [Thomas, Joseph. Geopolitical Analyst, Thailand. U.S. “Soft Power”: How to Dominate Without the Use of Force or Coercion 3/20/18. Global Research Centre. https://www.globalresearch.ca/us-soft-power-how-to-dominate-without-the-use-of-force-or-coercion/5632991 //#evilempire]

Foreign Affairs magazine, published by big-business-funded US policy think tank, the Council on Foreign Relations, would reveal in a review of Joseph Nye’s book, “Soft Power: The Means to Success in World Politics,” that (my emphasis): …the term “soft power” — the ability of a country to persuade others to do what it wants without force or coercion — is now widely invoked in foreign policy debates. The United States can dominate others, but it has also excelled in projecting soft power, with the help of its companies, foundations, universities, churches, and other institutions of civil society; U.S. culture, ideals, and values have been extraordinarily important in helping Washington attract partners and supporters. And in reality, US domination and its soft power work together to create what is modern day empire and the foundation of US global hegemony. The United States’ many organisations, from the National Endowment for Democracy (NED) to its Young Leaders Initiatives targeting the Americas (Young Leaders of the Americas Initiative/YLAI), Africa (Young African Leaders Initiative/YALI) and Southeast Asia (Young Southeast Asian Leaders Initiative/YSELAI), all seek to indoctrinate and co-opt the populations of targeted nations to serve the interests of Wall Street and Washington rather than their own. While the US does this often under the guise of promoting “democracy,” it is clearly engaged in precisely the opposite. While democracy is generally understood as a process of self-determination, through US soft power, the process is co-opted and abused to allow Wall Street and Washington to determine the policies and direction a targeted nation takes rather than its own people. Often times victims of US soft power are youths who are indoctrinated in university programmes or targeted by US-funded fronts posing as nongovernmental organisations (NGOs). They believe they have arrived at their conclusions and adopted their personal set of principles on their own, unaware of the amount of time, money and energy invested in ensuring they adopt a worldview and a set of political proclivities that serve US interests rather than those of their own nation, people and those of the individuals themselves. The use of soft power is not new. It is a practice as old as empire itself. The ancient Romans engaged in sophisticated cultural colonisation we could easily describe as soft power. Ancient Roman historian Tacitus (c. AD 56 – after 117) would adeptly describe the systematic manner in which Rome pacified foreign peoples and the manner in which it would extend its sociocultural and institutional influence over conquered lands. In chapter 21 of his book Agricola, named so after his father-in-law whose methods of conquest were the subject of the text, Tacitus would explain (my emphasis): His object was to accustom them to a life of peace and quiet by the provision of amenities. He therefore gave official assistance to the building of temples, public squares and good houses. He educated the sons of the chiefs in the liberal arts, and expressed a preference for British ability as compared to the trained skills of the Gauls. The result was that instead of loathing the Latin language they became eager to speak it effectively. In the same way, our national dress came into favour and the toga was everywhere to be seen. And so the population was gradually led into the demoralizing temptation of arcades, baths and sumptuous banquets. The unsuspecting Britons spoke of such novelties as ‘civilization’, when in fact they were only a feature of their enslavement. In a very similar manner, youths today in nations targeted by US soft power describe the notions of “democracy” and “human rights’ as well as Western-style neo-liberal politics and institutions as “civilisation.” They often seek out every opportunity to disparage the culture and institutions of their own nation, describing them as backwards and demanding they be promptly replaced with new notions and institutions modelled after or directly beholden to those in the US and Europe. Thailand’s “Color Revolution”: US Meddles Abroad, Accuses Others of Meddling at Home. We can see across the whole of Asia this full process of soft power coming to fruition. Years and millions of dollars spent in infiltrating universities, indoctrinating youths through programmes like YSEALI or the British Chevening scholarships and funding and directing fronts posing as NGOs has led to the creation of entire political parties contesting power, comprised of indoctrinated youths beholden both to the notions of Western culture and institutions as well as the money and technical support nations like the US and UK directly provide these parties. Hong Kong’s “Demosisto” political party is made up entirely of youths and NGO representatives that have been created and funded for years by the US, UK and various other European interests. Myanmar’s ruling National League for Democracy has the top echelons of its party run by former journalists, activists and politicians cultivated, funded and trained by US-funded programmes for decades. This includes the current minister of information, Pe Myint. Case Study: Thailand The recently formed “Future Forward” opposition party headed by Thanathorn Juangroongruangkit,the heir of a multi-million dollar auto-parts business, has overtly advertised itself as an amalgamation of Western-style neo-liberal political ideology. While the supposed “founders” of the party appear to fully represent various social issues, the immense amount of money needed to perform “Future Forward’s” campaigning indicates the true founders (and financial sponsors) have chosen to remain behind the scenes. Reuters in its article, “Thai auto heir launches new party, promises to heal political rift,” would admit: Thanathorn introduced other party co-founders on Thursday, including a filmmaker and a number of activists involved in LGBT and environment causes, among other issues. Party co-founder Piyabutr Saengkanokkul, a law lecturer at Bangkok’s Thammasat University, said the party hopes to transcend Thailand’s political divide, a sentiment echoed by the student-led groups that have held anti-junta protests across Bangkok in recent weeks.  But some say the party might find it difficult to appeal to grassroots voters. “Will they, academics and NGOs … be able to connect with grassroots people, which is a large part of the electoral base?,” asked one Twitter user. To create that electoral base, the US is currently funding programmes inside Thailand specifically to infiltrate and co-opt local, regional and national concerns. Everything from environmental issues regarding the building of dams and power plants to women’s rights and access to education have been used as vectors by US-funded organisations seeking to co-opt and knit together various genuine individual pragmatic causes into a singular, national political clearinghouse. Part of this singular front’s responsibilities will be to serve as a voting bloc to place parties like “Future Forward” into power. NED and YSEALI are two examples of how single US organisations are targeting and cultivating youths much in the way Tacitus described in Agricola. These individuals are cultivated to be “leaders” who then create their own organisations (often US funded) to begin recruiting and indoctrinating additional members. Like a pyramid scheme, the efforts’ structure enables the US to recruit and indoctrinate Thais faster than any single US organisation could do on its own. While programmes like YSEALI boast of thousands of leaders who undoubtedly have infected thousands more with US-funded indoctrination, its still isn’t likely enough to create a voting bloc big enough to place “Future Forward” into power. But it doesn’t need to be. The US is still depending on existing political machines of politicians like US proxy Thaksin Shinawatra to create the support needed to propel “Future Forward” and other parties like it politically. Future Forward: The Evolution of a US Proxy   While Reuters admits that Future Forward has been accused of ties to US proxy Thaksin Shinawatra, the article fails to mention the substantial evidence those making the accusations are citing. Piyabutr, mentioned by Reuters as the party’s co-founder, had previously abused his academic credentials to organise and host an indoor event for Thaksin Shinawatra’s United Front for Democracy Against Dictatorship (UDD) also known as red shirts. The event held at Thammasat University, included Thaksin Shinawatra’s lobbyist Robert Amsterdam given a front row seat during the proceedings. The red shirts are Shinawatra’s street front whose reputation had become a political liability after back-to-back riots and deadly armed violence the front carried out in 2009-2010. Piyabutr and fellow academics endeavoured to rehabilitate the UDD’s public image by transforming it into a more academic movement, papering over the crass populism and demagoguery used to create it in the first place. While the “red shirt” street front is still used to give emerging successors to Shinawatra’s political machinery the numbers they need at public events, protests and rallies, this new, more academic face is what is being presented to the public, and the world. Soft Power’s Final Destination: Consume All, Including Allies   The US will continue attempting to create a voting bloc independent of traditional political figures like Thaksin Shinawatra and his own networks of patronage. While Thaksin Shinawatra has been a loyal servant of US interests for years, the US would prefer a political party and a voting bloc it controls entirely on its own. By Shinawatra supporting the creation of parties like “Future Forward” he is in reality sealing his own political fate. Special interests sponsoring “Future Forward’s” political activities are also creating a monster that will eventually consume them both politically and economically in the future. As demonstrated in nations around the world subjected to the full cycle of US meddling, co-opting, infiltration and domination, even those special interests that eagerly assisted US ambitions find themselves unwelcomed competitors once the US finally succeeds. Those who believe they can “ride the tiger” of US hegemony into power often find themselves the target of the very domestic networks of agitators and activists they helped the US create. Protecting Against US Soft Power  Clearly, the soft power process has nothing to do with any genuine interpretation of democracy. It is simply using democratic themes and procedures to lend legitimacy to what is modern day imperialism and the very sort of soft power employed by the Romans against the ancient world centuries ago. Thailand and other nations targeted by US soft power can only defend themselves by being able to both effectively expose US soft power methods, and by countering them through the work of indigenous institutions and genuine NGOs filling Thailand’s political, activist, educational, information and economic space sufficiently enough so that no room remains for foreign-funded alternatives. As to why the US is so interested in co-opting and controlling Thailand politically, the answer lies in Washington’s larger Asia-Pacific agenda which includes the encirclement and containment of China with nations that do business with and are entirely under the influence of Washington. A political party run by the products of decades of US cultural colonisation and soft power efforts taking office in Thailand would directly serve Washington’s wider regional ambitions and augment its efforts to co-opt and control Thailand’s Southeast Asian neighbours as well.

#### American primacy solves every threat---decline emboldens rivals and causes miscalc and arms races that escalate.

Hal Brands 18. Henry A. Kissinger Distinguished Professor of Global Affairs at the Johns Hopkins University School of Advanced International Studies, Senior Fellow at the Center for Strategic and Budgetary Assessments and the Foreign Policy Research Institute, Ph.D. in history from Yale University. “Chapter 6: Does America Have Enough Hard Power?” American Grand Strategy in the Age of Trump; pp. 129-133.

Much contemporary commentary favors the first option—reducing commitments—and denounces the third as financially ruinous and perhaps impossible.5 Yet significantly expanding American capabilities would not be nearly as economically onerous as it may seem. Compared to the alternatives, in fact, this approach represents the best option for sustaining American primacy and preventing a slide into strategic bankruptcy that will eventually be punished. Since World War II, the United States has had a military second to none. Since the Cold War, America has committed to having overwhelming military primacy. The idea, as George W. Bush declared in 2002, that America must possess “strengths beyond challenge” has featured in every major U.S. strategy document for a quarter century; it has also been reflected in concrete terms.6 From the early 1990s, for example, the United States consistently accounted for around 35 to 45 percent of world defense spending and maintained peerless global power-projection capabilities.7 Perhaps more important, U.S. primacy was also unrivaled in key overseas strategic regions—Europe, East Asia, the Middle East. From thrashing Saddam Hussein’s million-man Iraqi military during Operation Desert Storm, to deploying—with impunity—two carrier strike groups off Taiwan during the China-Taiwan crisis of 1995– 96, Washington has been able to project military power superior to anything a regional rival could employ even on its own geopolitical doorstep. This military dominance has constituted the hard-power backbone of an ambitious global strategy. After the Cold War, U.S. policymakers committed to averting a return to the unstable multipolarity of earlier eras, and to perpetuating the more favorable unipolar order. They committed to building on the successes of the postwar era by further advancing liberal political values and an open international economy, and to suppressing international scourges such as rogue states, nuclear proliferation, and catastrophic terrorism. And because they recognized that military force remained the ultima ratio regum, they understood the centrality of military preponderance. Washington would need the military power necessary to underwrite worldwide alliance commitments. It would have to preserve substantial overmatch versus any potential great-power rival. It must be able to answer the sharpest challenges to the international system, such as Saddam’s invasion of Kuwait in 1990 or jihadist extremism after 9/11. Finally, because prevailing global norms generally reflect hard-power realities, America would need the superiority to assure that its own values remained ascendant. It was impolitic to say that U.S. strategy and the international order required “strengths beyond challenge,” but it was not at all inaccurate. American primacy, moreover, was eminently affordable. At the height of the Cold War, the United States spent over 12 percent of GDP on defense. Since the mid-1990s, the number has usually been between 3 and 4 percent.8 In a historically favorable international environment, Washington could enjoy primacy—and its geopolitical fruits—on the cheap. Yet U.S. strategy also heeded, at least until recently, the fact that there was a limit to how cheaply that primacy could be had. The American military did shrink significantly during the 1990s, but U.S. officials understood that if Washington cut back too far, its primacy would erode to a point where it ceased to deliver its geopolitical benefits. Alliances would lose credibility; the stability of key regions would be eroded; rivals would be emboldened; international crises would go unaddressed. American primacy was thus like a reasonably priced insurance policy. It required nontrivial expenditures, but protected against far costlier outcomes.9 Washington paid its insurance premiums for two decades after the Cold War. But more recently American primacy and strategic solvency have been imperiled. THE DARKENING HORIZON For most of the post–Cold War era, the international system was— by historical standards—remarkably benign. Dangers existed, and as the terrorist attacks of September 11, 2001, demonstrated, they could manifest with horrific effect. But for two decades after the Soviet collapse, the world was characterized by remarkably low levels of great-power competition, high levels of security in key theaters such as Europe and East Asia, and the comparative weakness of those “rogue” actors—Iran, Iraq, North Korea, al-Qaeda—who most aggressively challenged American power. During the 1990s, some observers even spoke of a “strategic pause,” the idea being that the end of the Cold War had afforded the United States a respite from normal levels of geopolitical danger and competition. Now, however, the strategic horizon is darkening, due to four factors. First, great-power military competition is back. The world’s two leading authoritarian powers—China and Russia—are seeking regional hegemony, contesting global norms such as nonaggression and freedom of navigation, and developing the military punch to underwrite these ambitions. Notwithstanding severe economic and demographic problems, Russia has conducted a major military modernization emphasizing nuclear weapons, high-end conventional capabilities, and rapid-deployment and special operations forces— and utilized many of these capabilities in conflicts in Ukraine and Syria.10 China, meanwhile, has carried out a buildup of historic proportions, with constant-dollar defense outlays rising from US$26 billion in 1995 to US$226 billion in 2016.11 Ominously, these expenditures have funded development of power-projection and antiaccess/area denial (A2/AD) tools necessary to threaten China’s neighbors and complicate U.S. intervention on their behalf. Washington has grown accustomed to having a generational military lead; Russian and Chinese modernization efforts are now creating a far more competitive environment. Second, the international outlaws are no longer so weak. North Korea’s conventional forces have atrophied, but it has amassed a growing nuclear arsenal and is developing an intercontinental delivery capability that will soon allow it to threaten not just America’s regional allies but also the continental United States.12 Iran remains a nuclear threshold state, one that continues to develop ballistic missiles and A2/AD capabilities while employing sectarian and proxy forces across the Middle East. The Islamic State, for its part, is headed for defeat, but has displayed military capabilities unprecedented for any terrorist group, and shown that counterterrorism will continue to place significant operational demands on U.S. forces whether in this context or in others. Rogue actors have long preoccupied American planners, but the rogues are now more capable than at any time in decades. Third, the democratization of technology has allowed more actors to contest American superiority in dangerous ways. The spread of antisatellite and cyberwarfare capabilities; the proliferation of man-portable air defense systems and ballistic missiles; the increasing availability of key elements of the precision-strike complex— these phenomena have had a military leveling effect by giving weaker actors capabilities which were formerly unique to technologically advanced states. As such technologies “proliferate worldwide,” Air Force Chief of Staff General David Goldfein commented in 2016, “the technology and capability gaps between America and our adversaries are closing dangerously fast.”

13 Indeed, as these capabilities spread, fourth-generation systems (such as F-15s and F-16s) may provide decreasing utility against even non-great-power competitors, and far more fifth-generation capabilities may be needed to perpetuate American overmatch. Finally, the number of challenges has multiplied. During the 1990s and early 2000s, Washington faced rogue states and jihadist extremism—but not intense great-power rivalry. America faced conflicts in the Middle East—but East Asia and Europe were comparatively secure. Now, the old threats still exist—but the more permissive conditions have vanished. The United States confronts rogue states, lethal jihadist organizations, and great-power competition; there are severe challenges in all three Eurasian theaters. “I don’t recall a time when we have been confronted with a more diverse array of threats, whether it’s the nation state threats posed by Russia and China and particularly their substantial nuclear capabilities, or non-nation states of the likes of ISIL, Al Qaida, etc.,” Director of National Intelligence James Clapper commented in 2016. Trends in the strategic landscape constituted a veritable “litany of doom.”14 The United States thus faces not just more significant, but also more numerous, challenges to its military dominance than it has for at least a quarter century.

### Infrastructure

#### Infrastructures passes, but ONLY because of Biden’s PC

Harrison 9-10-2021, \*Jaime Harrison, Democratic National Committee Chairman. \*\*Interviewed by Mary C. Curtis, Roll Call columnist and host of the Equal Time podcast. ("Explaining reconciliation and the social issues at stake, with Mary C. Curtis", *Roll Call*, https://www.rollcall.com/2021/09/10/explaining-reconciliation-and-the-social-issues-at-stake-with-mary-c-curtis/)

Curtis: What role is the president plays, and you’re working with him? Harrison: I think the President plays an immense role. You know, he is the leader of our party. And so, you know, when you run into roadblocks in the end of the day, he will be the, you know, the executive, the decider-in-chief to help broker deals when they need to be, need to happen. But he’s laid out the parameters for what he wants, you know, and these are all based off the promises that he made the American people when he ran for president. And so Speaker Pelosi and Leader Schumer and so many leaders in the House and the Senate are working in order to make that happen. And I believe, again, as somebody who’s been a veteran of these issues and these type of deliberations in the past, it will happen and the president will have a bill to sign, and in the end of the day, will make a dramatic and positive impact on the lives of the American people. Curtis: What happens if this bill, after all these markups, etc., compromises, it doesn’t pass? Harrison: It’s going to pass. That’s not an option. We are going to get something to to the president on his desk, so that he can sign and continue to deliver for the American people.

#### Pharma will lobby hard – that’ll – reconciliation proves

David Sirota, 8-23-2021, "Why DC's most powerful corporate lobbying group loves the 'Mod Squad'," Newsweek, https://www.newsweek.com/dcs-most-powerful-corporate-lobbying-group-thanked-these-9-democrats-why-1622111

The reconciliation bill is still being negotiated, and many Democratic lawmakers — including those in key swing districts—are pushing for it to include long-promised legislation to allow Medicare to use its enormous purchasing power to negotiate lower prices for prescription drugs. The pharmaceutical industry has aggressively lobbied against the initiative, which the Congressional Budget Office has estimated would save Medicare $345 billion in medicine costs. The nine House Democrats threatening to derail the reconciliation bill have raked in nearly $1.2 million from donors in the pharmaceutical and health products industries, according to data compiled by OpenSecrets. Joe Manchin Saw Huge Surge in Donations During Debate on For the People Act Manchin to Speak At Fundraiser With Oil Industry Leaders, GOP Donors Joe Manchin Condemns Anti-Fossil Fuel Provisions in Infrastructure Bill Among them are two of the Democratic Party's top recipients of health care industry money: Gottheimer ($228,186) and Schrader ($614,830). Schrader's third biggest career donor is Pfizer's political action committee, and his former chief of staff is now a registered lobbyist for the Pharmaceutical Researchers and Manufacturers Association, the pharmaceutical industry's main lobbying group. Both Gottheimer and Schrader signed a letter earlier this year slamming Democratic leaders' legislation to lower prescription drug prices. Eight out of the nine Democrats threatening to kill the budget bill also declined to sponsor Democrats' standalone legislation to let Medicare negotiate lower drug prices. In the Senate, Sinema's renewed threat to vote down a final reconciliation bill came after she received $519,000 from donors in the pharmaceutical and health products industries.

#### Endgame PC is key

Drum 10 Kevin, Political Blogger, Mother Jones, http://motherjones.com/kevin-drum/2010/03/immigration-coming-back-burner

Not to pick on Ezra or anything, but this attitude betrays a surprisingly common misconception about political issues in general. The fact is that political dogs never bark until an issue becomes an active one. Opposition to Social Security privatization was pretty mild until 2005, when George Bush turned it into an active issue. Opposition to healthcare reform was mild until 2009, when Barack Obama turned it into an active issue. Etc. I only bring this up because we often take a look at polls and think they tell us what the public thinks about something. But for the most part, they don't.1 That is, they don't until the issue in question is squarely on the table and both sides have spent a couple of months filling the airwaves with their best agitprop. Polling data about gays in the military, for example, hasn't changed a lot over the past year or two, but once Congress takes up the issue in earnest and the Focus on the Family newsletters go out, the push polling starts, Rush Limbaugh picks it up, and Fox News creates an incendiary graphic to go with its saturation coverage — well, that's when the polling will tell you something. And it will probably tell you something different from what it tells you now. Immigration was bubbling along as sort of a background issue during the Bush administration too until 2007, when he tried to move an actual bill. Then all hell broke loose. The same thing will happen this time, and without even a John McCain to act as a conservative point man for a moderate solution. The political environment is worse now than it was in 2007, and I'll be very surprised if it's possible to make any serious progress on immigration reform. "Love 'em or hate 'em," says Ezra, illegal immigrants "aren't at the forefront of people's minds." Maybe not. But they will be soon.

#### Crucial investments fight against climate change

Desjardins 21 (Lisa Desjardins is a correspondent for PBS NewsHour, where she covers news from the U.S. Capitol while also traveling across the country to report on how decisions in Washington affect people where they live and work, 8-5-2021, "Breaking down the infrastructure bill's impact on climate change," <https://www.pbs.org/newshour/show/breaking-down-the-infrastructure-bills-impact-on-climate-change)//eli>

The current infrastructure bill includes $150 billion for clean energy and climate change protections. Tens of billions would also be utilized to fight extreme weather like drought, wildfire, flooding and erosion, with a host of smaller programs like low-emission busses, cleaner ports and even more trees. Rebecca Leber, who covers climate change for Vox, joins Lisa Desjardins to discuss. Judy Woodruff: This week, we are turning our focus each night to the trillion-dollar bipartisan infrastructure package and different ways it aims to help the country. The bill makes historic investments in roads, bridges, clean water and broadband. But, as Lisa Desjardins reports, it also includes some unexpected provisions on climate change. Lisa Desjardins: This is an infrastructure bill. It's not a climate bill. But given the little amount of action on the issue so far, what is in this bill would make it the most significant climate legislation to come out of Congress yet. It would include $150 billion for clean energy and to protect from climate change. Tens of billions are to fight drought and respond to wildfire, flooding and erosion. And there's a host of smaller programs, low-emission buses, cleaner ports, streets with less run-off, even more trees. To help us understand what this means, I'm joined by Rebecca Leber, who covers climate change for Vox. Rebecca, tell us, what do you think are the most significant things in this bill for climate change? Rebecca Leber: I think this addresses two important sectors that contribute to climate change. One is our transportation sector. So, the bill makes a lot of investments in electric vehicles and also public transit, which are both critical to bringing down our pollution and the biggest contributor to climate change. It also makes big investments in the electricity sector, so improving things like transmission and electric-buying parts of the country that also make it critical to cleaning up the economy. In addition, this bill addresses the impacts of climate change. So, we have to both bring down emissions at the same time that we prepare for the impacts we know are here and are coming. Lisa Desjardins: We spoke to a young woman from California who is experiencing climate change right now. I want to play what she told us today. Her name is Caroline Choi. Caroline Choi: I live in an island in the Bay Area in California. And within 35 years, part of where I live is going to be flooded and underwater due to sea level rise. Every time I bike on one of our bridges, I can look over the side and see that the water is almost at eye level. Lisa Desjardins: So, that's happening now in real time. Rebecca, you mentioned this, but I'm wondering, overall, what do you get from this bill about whether lawmakers are now thinking more about bracing for climate change vs. actually trying to prevent it? Rebecca Leber: The U.S. has lagged in its investments on climate change when you look at how it compares to other countries. So, this bill is historic, in that the government is finally putting funds in addressing the impacts of climate change. So, we have finally both parties acknowledging, at least in a bill, that people like this young woman are dealing with the actual impacts of sea level rise and increased flooding and wildfires.

#### Warming leads to extinction – it’s a conflict-multiplier and defense doesn’t assume non-linearity

Kareiva 18, Ph.D. in ecology and applied mathematics from Cornell University, director of the Institute of the Environment and Sustainability at UCLA, Pritzker Distinguished Professor in Environment & Sustainability at UCLA, et al. (Peter, “Existential risk due to ecosystem collapse: Nature strikes back,” *Futures*, 102)

In summary, six of the nine proposed planetary boundaries (phosphorous, nitrogen, biodiversity, land use, atmospheric aerosol loading, and chemical pollution) are unlikely to be associated with existential risks. They all correspond to a degraded environment, but in our assessment do not represent existential risks. However, the three remaining boundaries (climate change, global freshwater cycle, and ocean acidification) do pose existential risks. This is because of intrinsic positive feedback loops, substantial lag times between system change and experiencing the consequences of that change, and the fact these different boundaries interact with one another in ways that yield surprises. In addition, climate, freshwater, and ocean acidification are all directly connected to the provision of food and water, and shortages of food and water can create conflict and social unrest. Climate change has a long history of disrupting civilizations and sometimes precipitating the collapse of cultures or mass emigrations (McMichael, 2017). For example, the 12th century drought in the North American Southwest is held responsible for the collapse of the Anasazi pueblo culture. More recently, the infamous potato famine of 1846–1849 and the large migration of Irish to the U.S. can be traced to a combination of factors, one of which was climate. Specifically, 1846 was an unusually warm and moist year in Ireland, providing the climatic conditions favorable to the fungus that caused the potato blight. As is so often the case, poor government had a role as well—as the British government forbade the import of grains from outside Britain (imports that could have helped to redress the ravaged potato yields). Climate change intersects with freshwater resources because it is expected to exacerbate drought and water scarcity, as well as flooding. Climate change can even impair water quality because it is associated with heavy rains that overwhelm sewage treatment facilities, or because it results in higher concentrations of pollutants in groundwater as a result of enhanced evaporation and reduced groundwater recharge. Ample clean water is not a luxury—it is essential for human survival. Consequently, cities, regions and nations that lack clean freshwater are vulnerable to social disruption and disease. Finally, ocean acidification is linked to climate change because it is driven by CO2 emissions just as global warming is. With close to 20% of the world’s protein coming from oceans (FAO, 2016), the potential for severe impacts due to acidification is obvious. Less obvious, but perhaps more insidious, is the interaction between climate change and the loss of oyster and coral reefs due to acidification. Acidification is known to interfere with oyster reef building and coral reefs. Climate change also increases storm frequency and severity. Coral reefs and oyster reefs provide protection from storm surge because they reduce wave energy (Spalding et al., 2014). If these reefs are lost due to acidification at the same time as storms become more severe and sea level rises, coastal communities will be exposed to unprecedented storm surge—and may be ravaged by recurrent storms. A key feature of the risk associated with climate change is that mean annual temperature and mean annual rainfall are not the variables of interest. Rather it is extreme episodic events that place nations and entire regions of the world at risk. These extreme events are by definition “rare” (once every hundred years), and changes in their likelihood are challenging to detect because of their rarity, but are exactly the manifestations of climate change that we must get better at anticipating (Diffenbaugh et al., 2017). Society will have a hard time responding to shorter intervals between rare extreme events because in the lifespan of an individual human, a person might experience as few as two or three extreme events. How likely is it that you would notice a change in the interval between events that are separated by decades, especially given that the interval is not regular but varies stochastically? A concrete example of this dilemma can be found in the past and expected future changes in storm-related flooding of New York City. The highly disruptive flooding of New York City associated with Hurricane Sandy represented a flood height that occurred once every 500 years in the 18th century, and that occurs now once every 25 years, but is expected to occur once every 5 years by 2050 (Garner et al., 2017). This change in frequency of extreme floods has profound implications for the measures New York City should take to protect its infrastructure and its population, yet because of the stochastic nature of such events, this shift in flood frequency is an elevated risk that will go unnoticed by most people. 4. The combination of positive feedback loops and societal inertia is fertile ground for global environmental catastrophes Humans are remarkably ingenious, and have adapted to crises throughout their history. Our doom has been repeatedly predicted, only to be averted by innovation (Ridley, 2011). However, the many stories of human ingenuity successfully addressing existential risks such as global famine or extreme air pollution represent environmental challenges that are largely linear, have immediate consequences, and operate without positive feedbacks. For example, the fact that food is in short supply does not increase the rate at which humans consume food—thereby increasing the shortage. Similarly, massive air pollution episodes such as the London fog of 1952 that killed 12,000 people did not make future air pollution events more likely. In fact it was just the opposite—the London fog sent such a clear message that Britain quickly enacted pollution control measures (Stradling, 2016). Food shortages, air pollution, water pollution, etc. send immediate signals to society of harm, which then trigger a negative feedback of society seeking to reduce the harm. In contrast, today’s great environmental crisis of climate change may cause some harm but there are generally long time delays between rising CO2 concentrations and damage to humans. The consequence of these delays are an absence of urgency; thus although 70% of Americans believe global warming is happening, only 40% think it will harm them (http://climatecommunication.yale.edu/visualizations-data/ycom-us-2016/). Secondly, unlike past environmental challenges, the Earth’s climate system is rife with positive feedback loops. In particular, as CO2 increases and the climate warms, that very warming can cause more CO2 release which further increases global warming, and then more CO2, and so on. Table 2 summarizes the best documented positive feedback loops for the Earth’s climate system. These feedbacks can be neatly categorized into carbon cycle, biogeochemical, biogeophysical, cloud, ice-albedo, and water vapor feedbacks. As important as it is to understand these feedbacks individually, it is even more essential to study the interactive nature of these feedbacks. Modeling studies show that when interactions among feedback loops are included, uncertainty increases dramatically and there is a heightened potential for perturbations to be magnified (e.g., Cox, Betts, Jones, Spall, & Totterdell, 2000; Hajima, Tachiiri, Ito, & Kawamiya, 2014; Knutti & Rugenstein, 2015; Rosenfeld, Sherwood, Wood, & Donner, 2014). This produces a wide range of future scenarios. Positive feedbacks in the carbon cycle involves the enhancement of future carbon contributions to the atmosphere due to some initial increase in atmospheric CO2. This happens because as CO2 accumulates, it reduces the efficiency in which oceans and terrestrial ecosystems sequester carbon, which in return feeds back to exacerbate climate change (Friedlingstein et al., 2001). Warming can also increase the rate at which organic matter decays and carbon is released into the atmosphere, thereby causing more warming (Melillo et al., 2017). Increases in food shortages and lack of water is also of major concern when biogeophysical feedback mechanisms perpetuate drought conditions. The underlying mechanism here is that losses in vegetation increases the surface albedo, which suppresses rainfall, and thus enhances future vegetation loss and more suppression of rainfall—thereby initiating or prolonging a drought (Chamey, Stone, & Quirk, 1975). To top it off, overgrazing depletes the soil, leading to augmented vegetation loss (Anderies, Janssen, & Walker, 2002). Climate change often also increases the risk of forest fires, as a result of higher temperatures and persistent drought conditions. The expectation is that forest fires will become more frequent and severe with climate warming and drought (Scholze, Knorr, Arnell, & Prentice, 2006), a trend for which we have already seen evidence (Allen et al., 2010). Tragically, the increased severity and risk of Southern California wildfires recently predicted by climate scientists (Jin et al., 2015), was realized in December 2017, with the largest fire in the history of California (the “Thomas fire” that burned 282,000 acres, https://www.vox.com/2017/12/27/16822180/thomas-fire-california-largest-wildfire). This catastrophic fire embodies the sorts of positive feedbacks and interacting factors that could catch humanity off-guard and produce a true apocalyptic event. Record-breaking rains produced an extraordinary flush of new vegetation, that then dried out as record heat waves and dry conditions took hold, coupled with stronger than normal winds, and ignition. Of course the record-fire released CO2 into the atmosphere, thereby contributing to future warming. Out of all types of feedbacks, water vapor and the ice-albedo feedbacks are the most clearly understood mechanisms. Losses in reflective snow and ice cover drive up surface temperatures, leading to even more melting of snow and ice cover—this is known as the ice-albedo feedback (Curry, Schramm, & Ebert, 1995). As snow and ice continue to melt at a more rapid pace, millions of people may be displaced by flooding risks as a consequence of sea level rise near coastal communities (Biermann & Boas, 2010; Myers, 2002; Nicholls et al., 2011). The water vapor feedback operates when warmer atmospheric conditions strengthen the saturation vapor pressure, which creates a warming effect given water vapor’s strong greenhouse gas properties (Manabe & Wetherald, 1967). Global warming tends to increase cloud formation because warmer temperatures lead to more evaporation of water into the atmosphere, and warmer temperature also allows the atmosphere to hold more water. The key question is whether this increase in clouds associated with global warming will result in a positive feedback loop (more warming) or a negative feedback loop (less warming). For decades, scientists have sought to answer this question and understand the net role clouds play in future climate projections (Schneider et al., 2017). Clouds are complex because they both have a cooling (reflecting incoming solar radiation) and warming (absorbing incoming solar radiation) effect (Lashof, DeAngelo, Saleska, & Harte, 1997). The type of cloud, altitude, and optical properties combine to determine how these countervailing effects balance out. Although still under debate, it appears that in most circumstances the cloud feedback is likely positive (Boucher et al., 2013). For example, models and observations show that increasing greenhouse gas concentrations reduces the low-level cloud fraction in the Northeast Pacific at decadal time scales. This then has a positive feedback effect and enhances climate warming since less solar radiation is reflected by the atmosphere (Clement, Burgman, & Norris, 2009). The key lesson from the long list of potentially positive feedbacks and their interactions is that runaway climate change, and runaway perturbations have to be taken as a serious possibility. Table 2 is just a snapshot of the type of feedbacks that have been identified (see Supplementary material for a more thorough explanation of positive feedback loops). However, this list is not exhaustive and the possibility of undiscovered positive feedbacks portends even greater existential risks. The many environmental crises humankind has previously averted (famine, ozone depletion, London fog, water pollution, etc.) were averted because of political will based on solid scientific understanding. We cannot count on complete scientific understanding when it comes to positive feedback loops and climate change.

## Case

### Fwrk

#### Ill concede util – I outweigh under it

### Access adv

#### Patents aren't the barrier to access in developing countries -- numerous alt causes

**Ezell and Stevens 20** [Philip Stevens is the executive director of the Geneva Network, which he founded in 2015. He is also a senior fellow at the Institute for Democracy and Economic Affairs, Malaysia. Formerly he was an official at the World Intellectual Property Organization (WIPO) in Geneva, where he worked in its Global Challenges Division. Philip has also worked as director of policy for International Policy Network, a United Kingdom-based think tank, as well as holding research positions with the Adam Smith Institute and Reform—both public policy think tanks in London. He holds degrees from the London School of Economics and the University of Durham, United Kingdom. Stephen J. Ezell is ITIF vice president for Global Innovation Policy and focuses on science, technology, and innovation policy as well as international competitiveness and trade policy issues. He is the coauthor of Innovating in a Service Driven Economy: Insights Application, and Practice (Palgrave McMillan, 2015) and Innovation Economics: The Race for Global Advantage (Yale, 2012). "Delinkage Debunked: Why Replacing Patents With Prizes for Drug Development Won’t Work" Information Technology & Innovation Foundation, February 3, 2020 https://itif.org/publications/2020/02/03/delinkage-debunked-why-replacing-patents-prizes-drug-development-wont-work]

What about [In] lower- and middle-income countries, where public health coverage is often minimal and most health spending comes out of individuals’ pockets? Here, the real problem is not so much drug pricing, but a lack of coverage. For instance, a survey of 33 low-income countries found that out-of-pocket payments represent more than half of total health expenditures.64 As a result, many people struggle to afford even cheap essential medicines that have been off-patent for decades, let alone far more expensive physician fees and hospital costs. And while delinkage proponents assert the high cost of medicines as key a rationale for their proposals, the reality is the far bigger challenge in developing nations is with access to health care services in general, and access to needed medicines in particular. For example, reports estimate that as many as 1 billion people lack access to essential health care because of a shortage of trained health professionals.65 A 2014 WHO study estimated a shortage of 7 million public health care workers, with that number expected to rise to 13 million by 2035.66 More than 80 countries fail to meet the basic threshold of 23 skilled health professionals per 10,000 people.67 In other instances, individuals lack access to essential medicines, with their cost being a relatively small part of the problem. For instance, in 2014, researchers at the University of Utrecht in the Netherlands found that, on average, essential medicines are available in public-sector facilities in developing countries only 40 percent of the time.68 A 2009 survey of 36 countries found that 15 common generic medicines listed on the WHO Essential Medicines list were frequently unavailable in either the public or private sectors, with regional availability ranging from 29 percent in Africa to 54 percent in the Americas.69 Again, cost remains only part of the problem. Indeed, the vast majority of drugs—at least 90 percent—currently on WHO’s Essential Medicines list are off-patent.70 Yet essential generic medicines are frequently unavailable or unaffordable.71 The problem, in much larger part, stems from countries’ underdeveloped health systems and many people living in rural areas, far from care. In fact, approximately 70 percent of the world’s poor live in rural areas, where it becomes very difficult to cost-effectively deliver health care services and supplies. Improving health coverage and health systems is the answer to better health care in these countries. And of course, boosting productivity and per capita incomes in these nations, in large part through helping all industries—traded and non-traded alike—become more productive is the ultimate solution.72

#### Manufacturing is at capacity -- vaccine makers are already incentivized to maximize output -- the barriers are supply and logistics not IP -- plus supply-chain nationalism is an alt cause to the aff.

Alex **Tabarrok 5/6** [professor of economics at George Mason University "Patents are Not the Problem!" Marginal Revolution, May 6, 2021 https://marginalrevolution.com/marginalrevolution/2021/05/ip-is-not-the-constraint.html]

Patents are not the problem. All of the vaccine manufacturers are trying to increase supply as quickly as possible. Billions of doses are being produced–more than ever before in the history of the world. Licenses are widely available. AstraZeneca have licensed their vaccine for production with manufactures around the world, including in India, Brazil, Mexico, Argentina, China and South Africa. J&J’s vaccine has been licensed for production by multiple firms in the United States as well as with firms in Spain, South Africa and France. Sputnik has been licensed for production by firms in India, China, South Korea, Brazil and pending EMA approval with firms in Germany and France. Sinopharm has been licensed in the UAE, Egypt and Bangladesh. Novavax has licensed its vaccine for production in South Korea, India, and Japan and it is desperate to find other licensees but technology transfer isn’t easy and there are limited supplies of raw materials: Virtually overnight, [Novavax] set up a network of outside manufacturers more ambitious than one outside executive said he’s ever seen, but they struggled at times to transfer their technology there amid pandemic travel restrictions. They were kicked out of one factory by the same government that’s bankrolled their effort. Competing with larger competitors, they’ve found themselves short on raw materials as diverse as Chilean tree bark and bioreactor bags. They signed a deal with India’s Serum Institute to produce many of their COVAX doses but now face the realistic chance that even when Serum gets to full capacity — and they are behind — India’s government, dealing with the world’s worst active outbreak, won’t let the shots leave the country. Plastic bags are a bigger bottleneck than patents. The US embargo on vaccine supplies to India was precisely that the Biden administration used the DPA to prioritize things like bioreactor bags and filters to US suppliers and that meant that India’s Serum Institute was having trouble getting its production lines ready for Novavax. CureVac, another potential mRNA vaccine, is also finding it difficult to find supplies due to US restrictions (which means supplies are short everywhere). As Derek Lowe said: Abolishing patents will not provide more shaker bags or more Chilean tree bark, nor provide more of the key filtration materials needed for production. These processes have a lot of potential choke points and rate-limiting steps in them, and there is no wand that will wave that complexity away. Technology transfer has been difficult for AstraZeneca–which is one reason they have had production difficulties–and their vaccine uses relatively well understood technology. The mRNA technology is new and has never before been used to produce at scale. Pfizer and Moderna had to build factories and distribution systems from scratch. There are no mRNA factories idling on the sidelines. If there were, Moderna or Pfizer would be happy to license since they are producing in their own factories 24 hours a day, seven days a week (monopolies restrict supply, remember?). Why do you think China hasn’t yet produced an mRNA vaccine? Hint: it isn’t fear about violating IP. Moreover, even Moderna and Pfizer don’t yet fully understand their production technology, they are learning by doing every single day. Moderna has said that they won’t enforce their patents during the pandemic but no one has stepped up to produce because no one else can.

#### Pandemics won’t cause extinction

**GPP 2017** Global Priorities Project with the Future of Humanity Institute and Ministry for Foreign Affairs of Finland. The GPP aims to bring new analysis to the problem of how to allocate scarce resources between diverse global priorities such as education, health, enterprise, and future generations “Existential Risk Diplomacy and Governance” <https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf>)rc//AK

For most of human history, natural pandemics have posed the greatest risk of mass global fatalities.37 However, there are some reasons to believe that natural pandemics are **very unlikely to cause human extinction**. Analysis of the International Union for Conservation of Nature (IUCN) red list database has shown that of the 833 recorded plant and animal species extinctions known to have occurred since 1500, **less than 4%** (31 species) were ascribed to infectious disease.38 None of the mammals and amphibians on this list were globally dispersed, and other factors aside from infectious disease also contributed to their extinction. It **therefore** seems that our own species, which is very **numerous, globally dispersed**, and capable of a **rational response** to problems, is very unlikely to be killed off by a natural pandemic. One underlying explanation for this is that highly lethal pathogens can kill their hosts before they have a chance to spread, so there is a **selective pressure for pathogens not to be highly lethal**. Therefore, pathogens are likely to co-evolve with their hosts rather than kill all possible hosts.39

### Innovation

#### Vaccine makers are maximizing output now; affirming weakens the incentive to cooperate which turns case and worsens quality which increases hesitancy.

- Vaccine makers are financially incentivized to maximize output and they're currently doing so through voluntary licensing and tech transfers

- Loss of IP would weaken that incentive, leading to less cooperation and slower vaccine

- Voluntary cooperation with manufacturers key to vaccine quality which is necessary to check vaccine hesitancy

- IP not the barrier: countries can issue compulsory licenses but no one has, so either compulsory licenses solve case or no one else has the capacity to manufacture

Rachel **Silverman 21** [Policy Fellow, CGD. Rachel Silverman is a CGD policy fellow, where she leads policy-oriented research on global health financing and incentive structures. Silverman’s work focuses on the practical application of results-based financing; global health transitions; innovation models for global health; alignment & impact in international funding for family planning; and more. "Would Exempting COVID-19 Vaccines from Intellectual Property Rights Improve Global Access and Equity?" Center for Global Development, FEBRUARY 8, 2021 https://www.cgdev.org/debate/would-exempting-covid-19-vaccines-intellectual-property-rights-improve-global-access#about-contributors]

I agree that the current imperative is to scale existing vaccines as quickly as possible while maintaining strict safety and quality standards. But for the premise of this debate to be true, there would need to be additional manufacturers who *could* and *would* stand ready to manufacture additional vaccines if not thwarted by IP restrictions. I see no evidence that is currently the case—and, to the contrary, believe taking an antagonistic posture toward IP may actually slow or compromise production. Innovator companies are under enormous commercial and geopolitical pressure to scale as quickly as possible to meet enormous, immediate demand. Their profit-driven interest, in this case, is aligned with the global imperative to increase production. To do so, they are already cooperating widely with competitors and generic manufacturers, including via voluntary licenses, contracted production, and proactive technology transfer. Diluting that commercial incentive may reduce their interest in pursuing the voluntary horizontal collaborations that are already driving scale. It is also not clear that any additional generic manufacturers are “standing by” ready to produce. Under existing TRIPS flexibilities, countries can *already* issue compulsory licenses to produce vaccines without permission from the patent-holder. None have done so. Voluntary licensing and technology transfer from originator companies can help increase long-term manufacturing capacity, especially if paired with public investment; originators also have an interest in enforcing safety and quality control standards while doing so, which is especially important in the context of widespread vaccine hesitancy. Their cooperation is important for both speed and quality, and so far they seem willing to play ball.

#### Innovation in pandemics strong now -- covid proves

**Wilson et al 5/21** [Matt Craven, Adam Sabow, Lieven Van der Veken, and Matt Wilson "Not the last pandemic: Investing now to reimagine public-health systems" McKinsey, May 21, 2021 https://www.mckinsey.com/industries/public-and-social-sector/our-insights/not-the-last-pandemic-investing-now-to-reimagine-public-health-systems]

**R&D efforts in response to the COVID-19 pandemic have been unprecedented. Vaccine-development records have been smashed,** both for time to market and for the number of candidates advanced in a short period of time. **The bar for vaccine development during a crisis has been raised: CEPI (Coalition for Epidemic Preparedness Innovations) has suggested that for a future pandemic, it may be possible to develop a vaccine within 100 days**.7 On a less positive note, the limits of what can be achieved through drug repurposing have become clearer. No one expects that we will go back to the prepandemic R&D model, but **it will be important to ensure that the product-development lessons of the pandemic are fully internalized**.

#### Innovation strong now

**Ezell and Stevens 20** [Philip Stevens is the executive director of the Geneva Network, which he founded in 2015. He is also a senior fellow at the Institute for Democracy and Economic Affairs, Malaysia. Formerly he was an official at the World Intellectual Property Organization (WIPO) in Geneva, where he worked in its Global Challenges Division. Philip has also worked as director of policy for International Policy Network, a United Kingdom-based think tank, as well as holding research positions with the Adam Smith Institute and Reform—both public policy think tanks in London. He holds degrees from the London School of Economics and the University of Durham, United Kingdom. Stephen J. Ezell is ITIF vice president for Global Innovation Policy and focuses on science, technology, and innovation policy as well as international competitiveness and trade policy issues. He is the coauthor of Innovating in a Service Driven Economy: Insights Application, and Practice (Palgrave McMillan, 2015) and Innovation Economics: The Race for Global Advantage (Yale, 2012). "Delinkage Debunked: Why Replacing Patents With Prizes for Drug Development Won’t Work" Information Technology & Innovation Foundation, February 3, 2020 https://itif.org/publications/2020/02/03/delinkage-debunked-why-replacing-patents-prizes-drug-development-wont-work]

Yet tremendous progress has been made in recent decades. To tackle these challenges, the global pharmaceutical industry invested over $1.36 trillion in R&D in the decade from 2007 to 2016—and it’s expected that annual R&D investment by the global pharmaceutical industry will reach $181 billion by 2022.28 In no small part due to that investment, 943 new active substances have been introduced globally over the prior 25 years.29 The U.S. Food and Drug Administration (FDA) has approved more than 500 new medicines since 2000 alone. And these medicines are getting to more individuals: Global medicine use in 2020 will reach 4.5 trillion doses, up 24 percent from 2015.30 Moreover, there are an estimated 7,000 new medicines under development globally (about half of them in the United States), with 74 percent being potentially first in class, meaning they use a new and unique mechanism of action for treating a medical condition.31 In the United States, over 85 percent of all drugs sold are generics (only 10 percent of U.S. prescriptions are filled by brand-name drugs).32 And while some assert that biotechnology companies focus too often on “me-too” drugs that compete with other treatments already on the market, the reality is many drugs currently under development are meant to tackle some of the world’s most intractable diseases, including cancer and Alzheimer’s.33 Moreover, such arguments miss that many of the drugs developed in recent years have in fact been first of their kind. For instance, in 2014, the FDA approved 41 new medicines (at that point, the most since 1996) many of which were first-in-class medicines.34 In that year, 28 of the 41 drugs approved were considered biologic or specialty agents, and 41 percent of medicines approved were intended to treat rare diseases.35 Yet even when a new drug isn’t first of its kind, it can still produce benefits for patients, both through enhanced clinical efficacy (for instance, taking the treatment as a pill rather than an injection, with a superior dosing regimen, or better treatment for some individuals who don’t respond well to the original drug) and by generating competition that exerts downward price pressures. For example, a patient needing a cholesterol drug has a host of statins from which to choose, which is important because some statins produce harmful side effects for some patients. Similarly, patients with osteoporosis can choose from Actonel, Boniva, or Fosomax. Or take for example Hepatitis C, which until recently was an incurable disease eventually requiring a liver transplant for many patients. In 2013, a revolutionary new treatment called Solvadi was released that boosted cure rates to 90 percent. This was followed in 2014 by an improved treatment called Harvoni, which cures the Hepatitis C variant left untouched by Solvadi. Since then, an astonishing six new treatments for the disease have received FDA approval, opening up a wide range of treatment options that take into account patients’ liver and kidney status, co-infections, potential drug interactions, previous treatment failures, and the genotype of HCV virus.36 “If you have to have Hepatitis C, now is the time to have it,” as Douglas Dieterich, a liver specialist at the Icahn School of Medicine at Mount Sinai Hospital in New York, told the Financial Times. “We have these marvellous drugs we can treat you with right now, without side effects,” he added. “And this time next year, we’ll have another round of drugs available.”37 Moreover, the financial potential of this new product category has led to multiple competing products entering the market in quick succession, in turn placing downward pressure on prices.38 As Geoffrey Dusheiko and Charles Gore write in The Lancet, “The market has done its work for HCV treatments: after competing antiviral regimens entered the market, competition and innovative price negotiations have driven costs down from the initially high list prices in developed countries.”39

#### Empirics confirm that profits are key to pharmaceutical R&D.

**Goldman and Lakdawalla 18** [Dana Goldman (Nonresident Senior Fellow - Economic Studies, USC-Brookings Schaeffer Initiative for Health Policy) Darius Lakdawalla (Director of Research - USC Schaeffer Center for Health Policy & Economics Quintiles Chair in Pharmaceutical Development and Regulatory Innovation - USC School of Pharmacy Professor - USC Price School of Public Policy) "The global burden of medical innovation" This report was originally published at the Schaeffer Center for Health Policy & Economics at the University of Southern California. This analysis is part of the USC-Brookings Schaeffer Initiative for Health Policy, which is a partnership between the Center for Health Policy at Brookings and the University of Southern California Schaeffer Center for Health Policy & Economics. January 30, 2018 https://www.brookings.edu/research/the-global-burden-of-medical-innovation/]

What we pay for medicines today affects the number and kinds of drugs discovered tomorrow. Empirical research has established that drug development activity is sensitive to expected future revenues in the market for those drugs. The most recent evidence suggests that it takes $2.5 billion in additional drug revenue to spur one new drug approval, based on data from 1997 to 2007.[3 ]Another study assesses the Orphan Drug Act, passed in 1982 to stimulate development of treatments for rare diseases. Its key feature was the granting of market exclusivity that would restrict entry by competitors — in other words, allow for higher prices. The result was a dramatic increase in the number of compounds brought into development to treat rare diseases (figure 3).[4 ] This linkage may not help patients with tuberculosis today in Nigeria and Indonesia — two poor countries hardest hit by tuberculosis — but it is currently benefiting patients in the same countries who have HIV. Decades ago, demand for HIV treatment in wealthy countries spurred medical breakthroughs that have since found their way — albeit more slowly than we would like — into the poorest corners of the globe. As of July 2017, 20.9 million people living with HIV were accessing antiretroviral therapy globally; 60 percent of them live in eastern and southern Africa.[5]

#### Strong IP protections key to innovation – the aff limits that

**Ezell and Stevens 20** [Philip Stevens is the executive director of the Geneva Network, which he founded in 2015. He is also a senior fellow at the Institute for Democracy and Economic Affairs, Malaysia. Formerly he was an official at the World Intellectual Property Organization (WIPO) in Geneva, where he worked in its Global Challenges Division. Philip has also worked as director of policy for International Policy Network, a United Kingdom-based think tank, as well as holding research positions with the Adam Smith Institute and Reform—both public policy think tanks in London. He holds degrees from the London School of Economics and the University of Durham, United Kingdom. Stephen J. Ezell is ITIF vice president for Global Innovation Policy and focuses on science, technology, and innovation policy as well as international competitiveness and trade policy issues. He is the coauthor of Innovating in a Service Driven Economy: Insights Application, and Practice (Palgrave McMillan, 2015) and Innovation Economics: The Race for Global Advantage (Yale, 2012). "Delinkage Debunked: Why Replacing Patents With Prizes for Drug Development Won’t Work" Information Technology & Innovation Foundation, February 3, 2020 https://itif.org/publications/2020/02/03/delinkage-debunked-why-replacing-patents-prizes-drug-development-wont-work]

As noted previously, opponents of the current market- and IP-based system contend patents enable their holders to exploit a (temporary) market monopoly by inflating prices many multiples beyond the marginal cost of production. But rather than a conventional neoclassical analysis, an analysis based on “innovation economics” finds it is exactly this “distortion” that is required for innovation to progress. As William Baumol has pointed out, “Prices above marginal costs and price discrimination become the norm rather than the exception because … without such deviations from behaviour in the perfectly competitive model, innovation outlays and other unavoidable and repeated sunk outlays cannot be recouped.”40 Or, as the U.S. Congressional Office of Technology Assessment found, “Pharmaceutical R&D is a risky investment; therefore, high financial returns are necessary to induce companies to invest in researching new chemical entities.”41 This is also why, in 2018, the U.S. Congressional Budget Office estimated that because of high failure rates, biopharmaceutical companies would need to earn a 61.8 percent rate of return on their successful new drug R&D projects in order to match a 4.8 percent after-tax rate of return on their investments.42 Indeed, it’s the ability to recoup fixed costs, not just marginal costs, through mechanisms such as patent protection that lies at the heart of all innovation-based industries and indeed all innovation and related economic progress. If companies could not find a way to pay for their R&D costs, and could only charge for the costs of producing the compound, there would be no new drugs developed, just as there would be no new products developed in any industry. Innovating in the life sciences remains expensive, risky, difficult, and uncertain. Just 1 in 5,000 drug candidates make it all the way from discovery to market.43 A 2018 study by the Deloitte Center for Health Solutions, “Unlocking R&D productivity: Measuring the return from pharmaceutical innovation 2018,” found that “the average cost to develop an asset [an innovative life-sciences drug] including the cost of failure, has increased in six out of eight years,” and that the average cost to create a new drug has risen to $2.8 billion.44 Related research has found the development of new drugs requires years of painstaking, risky, and expensive research that, for a new pharmaceutical compound, takes an average of 11.5 to 15 years of research, development, and clinical trials, at a cost of $1.7 billion to $3.2 billion.45 IP rights—including patents, copyrights, and data exclusivity protections—give innovators, whether in the life sciences or other sectors, the confidence to undertake the risky and expensive process of innovation, secure in the knowledge they’ll be able to capture a share of the gains from their efforts. And these gains are often only a small fraction of the true value created. For instance, Yale University economist William Nordhaus estimated inventors capture just 4 percent of the total social gains from their innovations; the rest spill over to other companies and society as a whole.46 Without adequate IP protection, private investors would never find it viable to fund advanced research because lower-cost copiers would be in a position to undercut the legitimate prices (and profits) of innovators, even while still generating substantial profits on their own.47 As the report “Wealth, Health and International Trade in the 21st Century” concludes, “Conferring robust intellectual property rights is, in the pharmaceutical and other technological-development contexts, in the global public’s long-term interests. Without adequate mechanisms for directly and indirectly securing the private and public funding of medicines and vaccines, research and development communities across the world will lose future benefits that would far outweigh the development costs involved.”48

#### Counterfeit Meds Turn - A vaccine waiver greenlights counterfeit medicine – independently turns Case.

**Conrad 5-18** John Conrad 5-18-2021 "Waiving intellectual property rights is not in the best interests of patients" <https://archive.is/vsNXv#selection-5353.0-5364.0> (president and CEO of the Illinois Biotechnology Innovation Organization in Chicago.)//Elmer

The Biden's administration's support for India and South Africa's proposal before the World Trade Organization to temporarily waive anti-COVID vaccine patents to boost its supply will fuel the **development of counterfeit vaccines and weaken the already strained global supply chain**. The proposal will not increase the effective number of COVID-19 vaccines in India and other countries. The manufacturing standards to produce COVID-19 vaccines are **exceptionally complicated**; it is unlike any other manufacturing process. To ensure patient safety and efficacy, only manufacturers with the **proper facilities and training should produce the vaccine, and they are**. Allowing a temporary waiver that permits compulsory licensing to allow a manufacturer to export counterfeit vaccines will **cause confusion and endanger public health**. For example, between 60,000 and 80,000 children in Niger with fatal falciparum malaria were treated with a counterfeit vaccine containing incorrect active pharmaceutical ingredients, resulting in more than **100 fatal infections.** Beyond the patients impacted, counterfeit drugs erode public confidence in health care systems and the pharmaceutical industry. Vaccine hesitancy is a rampant threat that feeds off of the distribution of misinformation. Allowing the production of vaccines from improper manufacturing facilities further opens the door for antivaccine hacks to stoke the fear fueling **vaccine hesitance**.

#### Bottleneck Turn - The plan only hurts manufacturing moving bottlenecks to less efficient manufacturers

Alex **Knapp, 5/7** [Alex Knapp, (senior editor at Forbes covering healthcare, science, and cutting edge technology.)]. "Patent Waivers Won’t Impact Big Pharma’s Bottom Line—But Could Slow Covid Vaccine Rollouts." Forbes, 5-7-2021, Accessed 8-5-2021. https://www.forbes.com/sites/alexknapp/2021/05/07/patent-waivers-wont-impact-big-pharmas-bottom-line-but-could-slow-covid-vaccine-rollouts/?sh=78866f727862 // duongie

On Wednesday, the Biden Administration stated that it would support a proposal to temporarily waive protection of intellectual property (IP) rights for Covid vaccines during the pandemic, in a bid to boost production and accelerate vaccine distribution throughout the world. Industry trade groups immediately criticized the move, and investors reacted simultaneously—share prices plummeted, though they’ve been slowly recovering Thursday and Friday. Wall Street analysts at Morgan Stanley, Jefferies and Brookline Capital Markets, however, said in reports this week that waiving vaccine IP was unlikely to impact the financials of major vaccine makers, noting that current bottlenecks in vaccine production are related to supply chain, technical knowledge and difficulty in scaling up production. However, they caution that for the same reason, waivers could slow down current production by disrupting the market for raw materials. “Manufacturing supplies, raw materials, vials, stoppers and other key materials are in limited supply for 2021, and certainly for the 2021 calendar year,” wrote analysts from Jeffries, meaning that waivers can’t solve immediate vaccination needs in India and South Africa, where Covid-19 cases are surging. That report also notes that the mRNA vaccines from Pfizer and Moderna have yet to be authorized for use in India, as regulators desired local clinical trial data, which is another hurdle to overcome. Morgan Stanley commented that U.S. support alone doesn’t necessarily mean that a World Trade Organization agreement on the waiver would happen, especially since Germany has expressed opposition. The firm additionally notes that “manufacturing vaccines is a much more complicated process than making chemical drugs, and a patent waiver by itself would not enable other entities to manufacture their own copies of complex vaccines.” Jefferies analysts also remarked that another barrier to increased vaccine production is “ensuring the quality of the product, which is also not trivial.” Contractors for vaccine makers Pfizer, AstraZeneca and Johnson & Johnson have all run into quality-control issues that have led to millions of vaccine doses being discarded. On a company earnings call yesterday, Moderna CEO Stéphane Bancel said he doubted that waiving IP rights would impact his company much, because it would take months or even years for other companies to scale up manufacturing. Meanwhile, the biotech company has recently committed to expanding its own manufacturing capacity and expects to be able to make up to 3 billion doses of vaccine in 2022. Morgan Stanley analysts noted that in October 2020, Moderna “stated it would not enforce its patents during the pandemic, but to our knowledge, no one else has started manufacturing a vaccine that would violate Moderna’s patents.” The team at Brookline Capital markets noted that if a company did begin manufacturing vaccines based on Moderna’s patents, the upside would be an additional licensing revenue stream for the company. On Friday, vaccine manufacturer Novavax, which has reached an agreement with the private-public global health partnership Gavi to provide 1.1 billion vaccine doses to low income countries, stated its opposition to the WTO waiving patents, arguing that it “could further constrain resources by diverting them to entities incapable of manufacturing safe and effective vaccines in the near term.”

#### Drug companies are voluntarily expanding access through donations and tiered pricing.

Donald **McNeil 19** [science reporter for NYT "Drug Companies Are Focusing on the Poor After Decades of Ignoring Them" The New York Times, June 24, 2019 https://www.nytimes.com/2019/06/24/health/drugs-poor-countries-africa.html]

Twenty years ago, thousands of Africans died of AIDS each day as pharmaceutical companies looked on, murmuring sympathy but claiming that they could not afford to cut the prices of their $15,000-a-year H.I.V. drugs. It’s hard to imagine such a nightmare unfolding today. Vast changes have swept the drug industry over the last two decades. Powerful medicines once available only in rich countries are distributed in the most remote regions of the globe, saving millions of lives each year. Nearly 20 million Africans are now on H.I.V. treatment — for less than $100 a year. Top-quality drugs for malaria, tuberculosis, hepatitis C and some cancers are now sold at rock-bottom prices in poor countries. Once demonized as immoral profiteers, many of the world’s biggest 20 pharmaceutical companies now boast about how they help poor countries and fight neglected diseases. They compete on the Access to Medicine Index, which scores their charitable efforts. Several of them even cooperate with the Indian generics companies they once dismissed as “pirates” by sub-licensing patents so the generics makers can produce cheap drugs for Africa, Asia and Latin America.

#### Even with a patent, substitutes exist.

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“The obvious answer is that the benefits from eliminating drug patents would be much smaller than predicted by the prize literature, and there might not be any benefits at all,” argues Benjamin Roin of the MIT Sloan School of Management.63 Professor Roin points out that patents are frequently mischaracterized as giving the right to monopoly profits, effectively forcing consumers to pay the full monopoly price of medicines. In reality, patents grant no such right, merely giving the right to exclude others from copying a specific patented product, and even then only for a limited period of time. Moreover, while patents do provide temporary exclusive rights, there are usually many substitutes and alternatives to a patented product that make market monopoly very rare and always, if they exist, temporary. Markets for products covered by IP are often intensely competitive, because there are usually many substitutes and alternatives. This is particularly true of medicine.

#### Prices declining now.

Thomas B. **Cueni 17** [Director General at the International Federation of Pharmaceutical Manufacturers & Associations, interviewed by John Zarocostas "Perspectives on access to medicines and IP rights" WIPO Magazine, December 2017 https://www.wipo.int/wipo\_magazine/en/2017/06/article\_0002.html]

Thomas Cueni: I understand concerns surrounding the cost of individual drugs and that companies have to justify the value they bring, but I believe the price debate is overblown. On aggregate there is no sign that drug costs are out of control. The latest OECD data, for example, show that between 2009 and 2015, there was a 0.5 percent annual reduction in per capita expenditure for pharmaceuticals. More importantly, expenditures on health should be seen as an investment towards increased welfare, productivity and economic growth. They should not be seen exclusively as a fiscal cost at a given point in time. The research-based biopharmaceutical industry is delivering breakthrough medicines for patients. Over the last 10 years, we have seen dramatic improvements in treatments for HIV, HCV (hepatitis C), oncology and many rare diseases that have transformed the lives of patients. The wider developments driving healthcare spending, and the systemic challenges that limit access to high-quality, safe and effective medicines around the world, need to be considered.

#### TURN: Innovation lowers the price of existing drugs.

Stephen **Moore and** Steve **Forbes 18** [Stephen Moore is the Distinguished Visiting Fellow for Project for Economic Growth at The Heritage Foundation. "Foreign Price Controls Jeopardize Global Health and Raise Drug Costs for Americans" Committee to Unleash Prosperity, JULY 2018 https://web.archive.org/web/20200522024422/https://committeetounleashprosperity.com/wp-content/uploads/2018/07/CTUP\_WhitePaper\_Moore\_Jul2018.pdf]

To equalize the costs of drug development, the Trump administration has proposed a series of reforms to lower drug prices for Americans. Here’s where innovation deserves another look, because pharmaceutical R&D isn’t just the key to unlocking new cures: it’s also one of the main ways of reducing prices for existing drugs, by encouraging competition in the marketplace. Conversely, while some of the White House’s proposed reforms make sense, there is a danger that lowering prices and thus profits with artificial price controls here at home will chase investment outside the U.S. and slow the development of new drugs. In fact, this could paradoxically raise health care costs for several reasons. First, research has shown that the entry of a new drug into the marketplace, often with additional benefits in the form of increased efficacy or tolerability, forces down the prices of other drugs in the same therapeutic class—**even before their patents have expired**. This is because, as physicians begin to sign prescriptions for the new entrant, insurers, pharmacy benefit managers and other intermediaries take advantage of this new competitor product to negotiate better deals for existing drugs. Similarly the introduction of several “me-too” or “follow on” drugs with comparable efficacy diminishes differentiation for each, reducing the price premium drug makers can demand for them.13,14,15 One of the most spectacular examples of the impact of new entrants on drug prices in recent years came in the fast-growing field of Hepatitis C treatments. Following Gilead’s introduction of the breakthrough Hepatitis C cure Sovaldi in 2013, competitors rushed a number of drugs exploiting the same underlying biological mechanism to market, resulting in dramatic price drops across the entire therapeutic class. This competition has resulted in rebates and discounts ranging from about 22 percent in 2014 to about 40-65 percent today.16,17 This analysis doesn’t include the overall cost savings projected from curing 2.9 million Americans with chronic Hepatitis C, including hospital stays and transplant costs, estimated at $100.3 billion in the U.S.18 Hepatitis C drugs are just one of the more dramatic cases of new entrants bringing down prices by offering cheaper alternatives in the same therapeutic class. One study found that seven new “follow-on” drugs developed to treat conditions including nonHodgkin’s lymphoma, ovarian cancer, psoriasis, and Huntington’s disease offered discounts over the incumbent drug ranging from 21 percent to 61 percent.19

#### Timeframe: any harms stemming from IP restrictions are temporary while the gains from innovation are durable and accumulate over time

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Put simply, the current market- and IP-based life-sciences innovation system is producing life-changing biomedical innovation. As Jack Scannell, a senior fellow at Oxford University’s Center for the Advancement of Sustainable Medical Innovation has explained, “I would guess that one can buy today, at rock bottom generic prices, a set of small-molecule drugs that has greater medical utility than the entire set available to anyone, anywhere, at any price in 1995.” He continued, “Nearly all the generic medicine chest was created by firms who invested in R&D to win future profits that they tried pretty hard to maximize; short-term financial gain building a long-term common good.”49 For example, on September 14, 2017, the FDA approved Mvasi, the first biosimilar for Roche’s Avastin, a breakthrough anticancer drug when it came out in the mid-1990s for lung, cervical, and colorectal cancer.50 In other words, a medicine to treat forms of cancer that barely existed 20 years ago is now available as a generic drug today. It’s this dynamic that enables us to imagine a situation wherein drugs to treat diseases that aren’t available anywhere at any price today (for instance, treatments for Alzheimer’s or Parkinson’s) might be available as generics in 20 years. But that will only be the case if we preserve (and improve where possible) a life-sciences innovation system that is generally working. The current system does not require wholesale replacement by a prize-based system that—notwithstanding a meaningful success here or there—has produced nowhere near a similar level of novel biomedical innovation.