# 1NC

## Off

### 1NC – CP

#### CP: The member nations of the World Trade Organization ought to reduce intellectual property protections for medicines by increasing penalties for patent abuse and evergreening fraud in the pharmaceutical industry.

#### **Evergreening links to politics and collapses innovation, BUT the downsides are empirically debunked media hype – shifting enforcement for existing patent law solves abuse without harming pharma**

Madigan & O'Connor 19 [Kevin Madigan joined CPIP in January of 2016. As Deputy Director, Kevin works closely with CPIP scholars in their research and promotion of comprehensive intellectual property law and policy. Before joining CPIP, Kevin worked as an intellectual property Research Associate at Finnegan Henderson Farabow Garrett & Dunner and also interned at the Recording Industry Association of America. Sean O’Connor, noted innovation law scholar, is a Professor of Law and Faculty Director of the Center for Intellectual Property x Innovation Policy (C-IP2) at George Mason University, Antonin Scalia Law School. "“No Combination Drug Patents Act” Stalls, but Threats to Innovation Remain." https://cip2.gmu.edu/2019/06/27/no-combination-drug-patents-act-stalls-but-threats-to-innovation-remain/]

This week, the Senate Judiciary Committee was to mark up a bill limiting patent eligibility for combination drug patents—new forms, uses, and administrations of FDA approved medicines. While the impetus was to curb so-called “evergreening” of drug patents, the effect would have been to stifle life-saving therapeutic innovations. Though the “No Combination Drug Patents Act”—reportedly to be introduced by Senator Lindsey Graham (R-SC)—was wisely withdrawn at the last minute, it’s likely not the last time that such a misconceived legislative effort will be introduced.

An Exaggerated Response to a Disputed Theory

The bill would have established a presumption of obviousness for drug or biologic patent applications whose invention was a new: dosing regimen, method of delivery, method of treatment, or formulation. While there was a rebuttal provision where the claim covered a new treatment for a new indication or “increase[d] . . . efficacy,” the latter was almost certain to introduce years of uncertainty and litigation. Further, the bill would have covered a broader class than true combination drug patents, in which one active ingredient is combined with another or with a non-drug.

Like many recent legislative efforts, the amendment sought to address a perceived lack of affordability of prescription drugs. After praising the America Invents Act of 2011 and subsequent Supreme Court rulings for strengthening the US patent system, the bill claimed that rising drug prices have outpaced “spending on research and development with respect to those drugs.” In addition to applauding Supreme Court decisions that have injected unquestionable uncertainty into patentable subject matter standards, the amendment went on to blame high drug prices on continually overstated issues related to advanced drug patents.

According to critics, combination drug patents have granted drug makers unearned and extended protection over existing drugs or biological products. But, quite simply, when properly issued by the USPTO under existing patentability standards, these are new patents for new products or processes.

Combination patents have been maligned as anticompetitive, resulting in a “thicket” of patents that impedes innovation through transaction costs and other inefficiencies. Unfortunately, notwithstanding a lack of empirical evidence validating the harm of follow-on innovation patents, patent thicket rhetoric is now being echoed by the media, the academy, courts, and policy makers in a fraught attempt to fix drug pricing.

Reports (see here, here, here, and here) from leading antitrust experts and intellectual property scholars have detailed the value of incremental innovation and challenged the notion that patent thickets are a true threat to competition and innovation. These studies have exposed patent thicket claims—much like the “troll” narrative that for years infected patent law debates—as an empty strawman theory, the repetition of which has led to undue confidence in its accuracy. The reality is that what critics point to as problematic cases of combination patents are in fact infrequent outliers, strategically highlighted to discount evidence of the value of new and innovative drug uses and administrations.

#### CP solves the aff while fostering innovation – directly comparative to the aff

Holman 20 [Christopher, Professor of Law, University of Missouri-Kansas City School of Law. “Congress Should Decline Ill-Advised Legislative Proposals Aimed at Evergreening of Pharmaceutical Patent Protection” p. 29-30 https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3593954]

Senator Thom Tillis, in his opening remarks prepared for one of the Senate’s hearings on drug pricing and intellectual property, expressed his concern that “[some members of Congress are] trying to take a sledgehammer to a problem that needs a fine tuned and highly efficient scalpel[, and that] by just focusing on patent protections, and the number of patent protections available to a single product, [Congress] may be doing more harm than good to our nation’s innovation economy.”112 Instead, he would support legislation that will “promote innovation and competition, allow the United States to continue to be the leader in medical and pharmaceutical research, and will ultimately lower drug prices for consumers.”113 It is important to bear in mind that the reason there has been such an uproar over the price of drugs is that these drugs provide huge benefits for society, far exceeding most other patentable innovation, and were it not for the patent incentive, it is very unlikely these products would have been made available to patients in the first place. In his testimony prepared for the same Senate hearing, Professor Olson reminded the Judiciary Committee that “even studies casting doubt on patent law’s efficacy generally tend to find that in the area of pharmaceuticals, patent law has a large, positive effect on social welfare by providing incentive for significant levels of drug development that otherwise simply would not occur.”114 By ~~impairing~~ impeding the ability of pharmaceutical companies to obtain patents on their inventions, the legislation discussed in this Article could discourage the investment necessary to bring the next generation of pharmaceutical innovation to patients. If pharmaceutical companies are deemed to be misusing patents to the detriment of patients and third-party payers, then it is that misuse of patents that should be targeted by legislation, not the patents themselves. For example, if the allegations regarding product hopping are true, and doctors are prescribing and patients using far more expensive follow-on products that provide little if any benefit to the patient, then that is a problem with the market that should be addressed, rather than denying patent protection for truly worthwhile product improvements. If pharmaceutical companies are using anticompetitive means to coerce patients and doctors into switching drugs, then antitrust laws can provide the remedy, as discussed above.115 Likewise, if the sheer number of patents that could be infringed by a single generic or biosimilar product exceeds the litigation capacity of any company attempting to bring such a product to market, then courts have it within their means to require the patent owner to limit infringement litigation to some reasonable number of patents and patent claims, and Congress could pass legislation that would encourage courts to do so, if such a reform is deemed necessary. By targeting misuse of patents by pharmaceutical companies, rather than pharmaceutical patents per se, it should be possible to address any valid concerns with the way pharmaceutical companies are using the patent system, while maintaining adequate incentives for the next generation of innovation.

### 1NC – DA

#### The Debt Ceiling expansion gives Democrats two months to finalize and pass Biden’s spending package – every moment is necessary to resolve intraparty disputes

Cochrane 10/7 Cochrane, Emily. Emily Cochrane is a correspondent based in Washington. She has covered Congress since late 2018, focusing on the annual debate over government funding and economic legislation, ranging from emergency pandemic relief to infrastructure. "Senate Leaders Agree to Vote on Short-Term Debt Ceiling Increase." N.Y. Times, 7 Oct. 2021, www.nytimes.com/2021/10/07/us/politics/debt-ceiling-senate.html.

Senator Chuck Schumer of New York, the majority leader, announced that he reached an agreement with Senator Mitch McConnell of Kentucky, the minority leader, to raise the federal borrowing limit through early December. “We have reached agreement to extend the debt ceiling through early December, and it’s our hope that we can get this done as soon as today.” “Republican and Democratic members and staff negotiated through the night in good faith. The pathway our Democratic colleagues have accepted will spare the American people any near-term crisis.” Video player loading Senator Chuck Schumer of New York, the majority leader, announced that he reached an agreement with Senator Mitch McConnell of Kentucky, the minority leader, to raise the federal borrowing limit through early December.CreditCredit...T.J. Kirkpatrick for The New York Times Oct. 7, 2021Updated 3:17 p.m. ET WASHINGTON — Top Senate Democrats and Republicans said on Thursday that they had struck a deal to allow the debt ceiling to be raised through early December, temporarily staving off the threat of a first-ever default on the national debt after the G.O.P. agreed to temporarily drop its blockade of an increase. Senator Chuck Schumer, Democrat of New York and the majority leader, announced that he had reached an agreement with Senator Mitch McConnell of Kentucky, the minority leader, to clear the way for a vote as early as Thursday on a short-term extension, with potentially as few as 11 days left before a possible default. The movement came the day after Mr. McConnell partly backed down from his refusal to allow any such increase to move forward, offering a temporary reprieve as political pressure mounted to avoid being blamed for a fiscal calamity. “It’s our hope that we can get this done as soon as today,” Mr. Schumer said on Thursday morning on the Senate floor. But one day after Mr. McConnell indicated that Republicans would stand aside and allow the short-term increase to advance, he and his top deputies were laboring on Thursday to ensure his members will put aside their objections and clear the path for a vote. “We gotta see if the deal is done,” President Biden told reporters during a trip to Illinois. “I’m not sure of that yet.” The agreed-upon bill would boost the legal debt cap by $480 billion, which the Treasury Department estimates would be enough to allow the government to continue borrowing through at least Dec. 3. The current debt limit was reinstated at $28.4 trillion on Aug. 1, and the Treasury Department has been using so-called extraordinary measures to delay a breach of the borrowing cap since then. The agency estimated that the government would no longer be able to pay all of its bills by Oct. 18, once those fiscal accounting maneuvers were exhausted. Without congressional action before then, economists and lawmakers have warned of catastrophic economic consequences, including the U.S. government having to choose between making payments on the interest on its debt or sending out Social Security checks and other crucial assistance. The legislation under consideration on Thursday did not offer a hard deadline for when cash would run out, and it would not restart the Treasury Department’s ability to employ extraordinary measures, such as curbing certain government investments, a Treasury official said. Some Republicans said they thought the set dollar figure would ensure the limit would not be reached again until at least January. The actual “X-date” will be determined by tax revenues that the government receives and expenditures that it must make near the end of the year. Making such projections has been especially difficult this year because the pandemic relief programs that are in place have made it harder to predict when money is coming and going. “There is no way to predict with any precision exactly how much you would need to increase the debt limit by to get to a certain date,” said Shai Akabas, the director of economic policy at the Bipartisan Policy Center, an independent think tank. But in aiming for Dec. 3, the deal may position the next debt limit fight to overlap once again with negotiations over avoiding a government shutdown, as funding is set to lapse on that same day if Congress does not approve new spending legislation beforehand. Democrats hope nearly two additional months will give them space to focus on finalizing and enacting most of President Biden’s domestic agenda, including hammering out an array of intraparty disagreements over an expansive multi-trillion-dollar social safety net and climate change package. In raising the prospect of a stopgap extension on Wednesday, Mr. McConnell had said that Republicans would allow Democrats to use normal procedures to consider it. But that commitment appeared in doubt on Thursday afternoon, as Republicans privately objected and leaders toiled to line up the votes needed. Should even one senator demand a recorded vote, at least 10 Republicans would be needed to join every Democrat to muster the 60 votes needed to move the bill forward. Image The movement on debt ceiling negotiations came the day after Senator Mitch McConnell backed down partially from his refusal to allow any such increase to move forward. Credit...T.J. Kirkpatrick for The New York Times “We’re having conversations with our members and kind of figuring out where people are, but, as you might expect, this is not an easy one to whip,,” said Senator John Thune of South Dakota, the No. 2 Republican. He added that, “in the end we’ll be there, but it will be a painful birthing process.” Some Republicans were wary of angering their base by allowing the bill to move forward, especially after former President Donald J. Trump issued a statement on Wednesday that attacked Mr. McConnell for “folding to the Democrats.” Mr. Trump seemed to be pressuring Republicans to force a showdown in the face of a looming default, saying that Mr. McConnell had “all of the cards with the debt ceiling, it’s time to play the hand.” Even if Republicans clear the way to allow the measure to pass, it does nothing to address the crux of the partisan stalemate over the debt. Most notably, Republicans have not dropped their demand that Democrats ultimately use an arcane and time-consuming budget process known as reconciliation to lift the debt ceiling into next year. Democrats are currently using that process to steer around Republican opposition and push through a sprawling domestic package that would address climate change, expand the social safety net with more health care and education benefits, and increase taxes on the wealthy and corporations. “The pathway our Democratic colleagues have accepted will spare the American people any near-term crisis,” Mr. McConnell said on the Senate floor. The extension, he added, also means “there’ll be no question they’ll have plenty of time” to use the reconciliation process to approve a long-term increase.

#### Infrastructure and reconciliation are the priority now. they’ll pass by new deadline

Alemany 10/12 [Jacqueline Alemany and Theodoric Meyer, "The new deadline to pass Biden's agenda is coming up fast", 10/12/21, https://www.washingtonpost.com/politics/2021/10/13/new-deadline-pass-biden-agenda-is-coming-up-fast/]

New deadline, old problems: Less than two weeks after House Democrats missed a deadline to hold a vote on the infrastructure bill, the party is staring down another one.

House Speaker Nancy Pelosi and Senate Majority Leader Chuck Schumer say they’re aiming to pass the $1.2 trillion infrastructure bill and a larger package stuffed full of Democrats’ child care, health care and climate change priorities by Oct. 31, when a short-term extension of highway funding is set to run out.

Coincidentally, Oct. 31 is the day before the much-anticipated United Nations climate summit kicks off in Glasgow, where administration officials are eager to show off legislation that would establish credibility in negotiations with foreign governments. White House press secretary Jen Psaki told reporters last month that Biden expected the reconciliation bill — much of which is focused on fighting climate change — would “move forward in advance of that.”

(Asked about it on Tuesday, Psaki said Biden would tout the administration's commitment to combating climate change in Glasgow “regardless of where the package stands.”)

And two days later, Virginians will head to the polls to elect a new governor in a contest lawmakers and the White House are watching closely. Former Democratic Gov. Terry McAuliffe has implored Democrats in Washington to pass the infrastructure bill by Election Day.

The 18-day sprint

Can Democrats really pass two massive bills in the next 18 days?

“Yes,” Rep. Gerry Connolly (D-Va.) told The Early yesterday evening. “Will it is a different matter. But can it? Yeah. We’re experts at coming right up against the edge and pulling a miracle.”

#### Pushing the plan takes time, energy, and political capital away from domestic legislation – big pharma and EU allies

Bhadrakumar 5/9 M K Bhadrakumar is a former Indian diplomat. "Biden’s talk of vaccine IP waiver is political theater." Asia Times, May 9, 2021, asiatimes.com/2021/05/bidens-talk-of-vaccine-ip-waiver-is-political-theater.

On the other hand, Biden, whose political life of half a century was largely spent in the US Congress, is well aware of the awesome clout of the pharmaceutical companies in American politics. From that lobby’s perspective, the patent waiver “amounts to the expropriation of the property of the pharmaceutical companies whose innovation and financial investments made the development of Covid-19 vaccines possible in the first place,” as a senior scholar at the Johns Hopkins Center for Health Security puts it. The US pharmaceutical industry and congressional Republicans have already gone on the offensive blasting Biden’s announcement, saying it undermines incentives for American innovation. Besides, the argument goes, even with the patent waiver, vaccine manufacturing is a complex process and is not like simply flipping a switch. Senator Richard Burr, the top Republican on the US Senate Health Committee, denounced Biden’s decision. “Intellectual property protections are part of the reason we have these life-saving products,” he said. “Stripping these protections only ensures we won’t have the vaccines or treatments we need when the next pandemic occurs.” The Republican senators backed by Republican Study Committee chairman Jim Banks propose to introduce legislation to block the move. Clearly, Biden would rather spend his political capital on getting the necessary legislation through Congress to advance his domestic reform agenda rather than spend time and energy to take on the pharmaceutical industry to burnish his image as a good Samaritan on the world stage. Conceivably, Biden could be counting on the “text-based negotiations” at the WTO dragging on for months, if not years, without reaching anywhere. The US support for the waiver could even be a tactic to persuade pharmaceutical firms to back less drastic steps like sharing technology and expanding joint ventures to boost global production quickly. So far Covid-19 vaccines have been distributed primarily to the wealthy countries that developed them, while the pandemic sweeps through poorer ones such as India, and the real goal is, after all, expanded vaccine distribution. Biden is well aware that there will be huge opposition to the TRIPS waiver from the United States’ European allies as well. The British press has reported that the UK has been in closed-door talks at the World Trade Organization in recent months along with the likes of Australia, Canada, Japan, Norway, Singapore, the European Union and the US, who all opposed the idea.

#### The bill quickly secures the vulnerable grid.

Carney 21 [Chris, August 6; Senior Policy Advisor at Nossaman LLC, former US Representative, Former Professor of Political Science at Penn State University; JD Supra, “The US Senate Infrastructure Bill: Securing Our Electrical Grid Through P3s and Grants,” https://www.jdsupra.com/legalnews/the-us-senate-infrastructure-bill-4989100/]

As we begin to better understand the main components of the Infrastructure Investment and Jobs Act that the US Senate is working to pass this week, it is clear that public-private partnerships ("P3s") are a favored funding mechanism of lawmakers to help offset high costs associated with major infrastructure projects in communities. And while past infrastructure bills have used P3s for more conventional projects, the current bill also calls for P3s to help pay for protecting the US electric grid from cyberattacks. Responding to the increasing number of cyberattacks on our nation’s infrastructure, and given the fragile physical condition of our electrical grid, the Senate included provisions to help state, local and tribal entities harden electrical grids for which they are responsible.

Section 40121, Enhancing Grid Security Through Public-Private Partnerships, calls for not only physical protections of electrical grids, but also for enhancing cyber-resilience. This section seeks to encourage the various federal, state and local regulatory authorities, as well as industry participants to engage in a program that audits and assesses the physical security and cybersecurity of utilities, conducts threat assessments to identify and mitigate vulnerabilities, and provides cybersecurity training to utilities. Further, the section calls for strengthening supply chain security, protecting “defense critical” electrical infrastructure and buttressing against a constant barrage of cyberattacks on the grid. In determining the nature of the partnership arrangement, the size of the utility and the area served will be considered, with priority going to utilities with fewer available resources.

Section 40122 compliments the previous section as it seeks to incentivize testing of cybersecurity products meant to be used in the energy sector, including SCADA systems, and to find ways to mitigate any vulnerabilities identified by the testing. Intended as a voluntary program, utilities would be offered technical assistance and databases of vulnerabilities and best practices would be created. Section 40123 incentivizes investment in advanced cybersecurity technology to strengthen the security and resiliency of grid systems through rate adjustments that would be studied and approved by the Secretary of Energy and other relevant Commissions, Councils and Associations.

Lastly, Section 40124, a long sought-after package of cybersecurity grants for state, local and tribal entities is included in the bill. This section adds language that would enable state, local and tribal bodies to apply for funds to upgrade aging computer equipment and software, particularly related to utilities, as they face growing threats of ransomware, denial of service and other cyberattacks. However, under Section 40126, cybersecurity grants may be tied to meeting various security standards established by the Secretary of Homeland Security, and/or submission of a cybersecurity plan by a grant applicant that shows “maturity” in understanding the cyber threat they face and a sophisticated approach to utilizing the grant.

While the final outcome of the Infrastructure Investment and Jobs Act may still be weeks or months away, inclusion of these provisions not only demonstrates a positive step forward for the application of federal P3s and grants generally, they also show that Congress recognizes the seriousness of the cyber threats our electrical grids face. Hopefully, through judicious application of both public-private partnerships and grants, the nation can quickly secure its infrastructure from cyberattacks.

#### Grid vulnerabilities spark nuclear war – extinction.

Klare 19 [Michael; November; Professor Emeritus of Peace and World Security Studies at Hampshire College; Arms Control Association, “Cyber Battles, Nuclear Outcomes? Dangerous New Pathways to Escalation,” https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation]

Yet another pathway to escalation could arise from a cascading series of cyberstrikes and counterstrikes against vital national infrastructure rather than on military targets. All major powers, along with Iran and North Korea, have developed and deployed cyberweapons designed to disrupt and destroy major elements of an adversary’s key economic systems, such as power grids, financial systems, and transportation networks. As noted, Russia has infiltrated the U.S. electrical grid, and it is widely believed that the United States has done the same in Russia.12 The Pentagon has also devised a plan known as “Nitro Zeus,” intended to immobilize the entire Iranian economy and so force it to capitulate to U.S. demands or, if that approach failed, to pave the way for a crippling air and missile attack.13

The danger here is that economic attacks of this sort, if undertaken during a period of tension and crisis, could lead to an escalating series of tit-for-tat attacks against ever more vital elements of an adversary’s critical infrastructure, producing widespread chaos and harm and eventually leading one side to initiate kinetic attacks on critical military targets, risking the slippery slope to nuclear conflict. For example, a Russian cyberattack on the U.S. power grid could trigger U.S. attacks on Russian energy and financial systems, causing widespread disorder in both countries and generating an impulse for even more devastating attacks. At some point, such attacks “could lead to major conflict and possibly nuclear war.”14

## Case

### 1NC – AMR

#### No extinction from pandemics

* Death rates as high as 50% didn’t collapse civilization
* Fossil fuel record caps risk at .1% per century
* health, sanitation, medicine, science, public health bodies, solve
* viruses can’t survive in all locations
* refugee populations like tribes, remote researchers, submarine crews, solve

Ord 20 Ord, Toby. Toby David Godfrey Ord (born 18 July 1979) is an Australian philosopher. He founded Giving What We Can, an international society whose members pledge to donate at least 10% of their income to effective charities and is a key figure in the effective altruism movement, which promotes using reason and evidence to help the lives of others as much as possible.[3] He is a Senior Research Fellow at the University of Oxford's Future of Humanity Institute, where his work is focused on existential risk. BA in Phil and Comp Sci from Melbourne, BPhil in Phil from Oxford, PhD in Phil from Oxford. The precipice: existential risk and the future of humanity. Hachette Books, 2020.

Are we safe now from events like this? Or are we more vulnerable? Could a pandemic threaten humanity’s future?10 The Black Death was not the only biological disaster to scar human history. It was not even the only great bubonic plague. In 541 CE the Plague of Justinian struck the Byzantine Empire. Over three years it took the lives of roughly 3 percent of the world’s people.11 When Europeans reached the Americas in 1492, the two populations exposed each other to completely novel diseases. Over thousands of years each population had built up resistance to their own set of diseases, but were extremely susceptible to the others. The American peoples got by far the worse end of exchange, through diseases such as measles, influenza and especially smallpox. During the next hundred years a combination of invasion and disease took an immense toll—one whose scale may never be known, due to great uncertainty about the size of the pre-existing population. We can’t rule out the loss of more than 90 percent of the population of the Americas during that century, though the number could also be much lower.12 And it is very difficult to tease out how much of this should be attributed to war and occupation, rather than disease. As a rough upper bound, the Columbian exchange may have killed as many as 10 percent of the world’s people.13 Centuries later, the world had become so interconnected that a truly global pandemic was possible. Near the end of the First World War, a devastating strain of influenza (known as the 1918 flu or Spanish Flu) spread to six continents, and even remote Pacific islands. At least a third of the world’s population were infected and 3 to 6 percent were killed.14 This death toll outstripped that of the First World War, and possibly both World Wars combined. Yet even events like these fall short of being a threat to humanity’s longterm potential.15 In the great bubonic plagues we saw civilization in the affected areas falter, but recover. The regional 25 to 50 percent death rate was not enough to precipitate a continent-wide collapse of civilization. It changed the relative fortunes of empires, and may have altered the course of history substantially, but if anything, it gives us reason to believe that human civilization is likely to make it through future events with similar death rates, even if they were global in scale. The 1918 flu pandemic was remarkable in having very little apparent effect on the world’s development despite its global reach. It looks like it was lost in the wake of the First World War, which despite a smaller death toll, seems to have had a much larger effect on the course of history.16 It is less clear what lesson to draw from the Columbian exchange due to our lack of good records and its mix of causes. Pandemics were clearly a part of what led to a regional collapse of civilization, but we don’t know whether this would have occurred had it not been for the accompanying violence and imperial rule. The strongest case against existential risk from natural pandemics is the fossil record argument from Chapter 3. Extinction risk from natural causes above 0.1 percent per century is incompatible with the evidence of how long humanity and similar species have lasted. But this argument only works where the risk to humanity now is similar or lower than the longterm levels. For most risks this is clearly true, but not for pandemics. We have done many things to exacerbate the risk: some that could make pandemics more likely to occur, and some that could increase their damage. Thus even “natural” pandemics should be seen as a partly anthropogenic risk. Our population now is a thousand times greater than over most of human history, so there are vastly more opportunities for new human diseases to originate.17 And our farming practices have created vast numbers of animals living in unhealthy conditions within close proximity to humans. This increases the risk, as many major diseases originate in animals before crossing over to humans. Examples include HIV (chimpanzees), Ebola (bats), SARS (probably bats) and influenza (usually pigs or birds).18 Evidence suggests that diseases are crossing over into human populations from animals at an increasing rate.19 Modern civilization may also make it much easier for a pandemic to spread. The higher density of people living together in cities increases the number of people each of us may infect. Rapid long-distance transport greatly increases the distance pathogens can spread, reducing the degrees of separation between any two people. Moreover, we are no longer divided into isolated populations as we were for most of the last 10,000 years.20 Together these effects suggest that we might expect more new pandemics, for them to spread more quickly, and to reach a higher percentage of the world’s people. But we have also changed the world in ways that offer protection. We have a healthier population; improved sanitation and hygiene; preventative and curative medicine; and a scientific understanding of disease. Perhaps most importantly, we have public health bodies to facilitate global communication and coordination in the face of new outbreaks. We have seen the benefits of this protection through the dramatic decline of endemic infectious disease over the last century (though we can’t be sure pandemics will obey the same trend). Finally, we have spread to a range of locations and environments unprecedented for any mammalian species. This offers special protection from extinction events, because it requires the pathogen to be able to flourish in a vast range of environments and to reach exceptionally isolated populations such as uncontacted tribes, Antarctic researchers and nuclear submarine crews. 21 It is hard to know whether these combined effects have increased or decreased the existential risk from pandemics. This uncertainty is ultimately bad news: we were previously sitting on a powerful argument that the risk was tiny; now we are not. But note that we are not merely interested in the direction of the change, but also in the size of the change. If we take the fossil record as evidence that the risk was less than one in 2,000 per century, then to reach 1 percent per century the pandemic risk would need to be at least 20 times larger. This seems unlikely. In my view, the fossil record still provides a strong case against there being a high extinction risk from “natural” pandemics. So most of the remaining existential risk would come from the threat of permanent collapse: a pandemic severe enough to collapse civilization globally, combined with civilization turning out to be hard to re-establish or bad luck in our attempts to do so.

#### Superbug impact is hype

**Tyson 12**{Greg, syndicated science columnist, PhD student in microbiology (Northwestern), “Tipping Point: The Threat of Antibiotic Resistance,” Helix, 8/17, http://helix.northwestern.edu/article/tipping-point-threat-antibiotic-resistance}

What happens if we stand pat? We won’t return to the Middle Ages, where plague wiped out one third of Europe’s population. The truth is that many of the most dangerous and widespread bacterial pathogens that truly deserve the moniker “superbug” have been tamed, especially in the United States. This is because for the healthy person, pathogens like MRSA are not an immediate threat. But people hospitalized and already sick with other conditions are in danger of contracting bacterial infections we are sometimes powerless to treat. It truly is a shame that we are constantly making medical advances in other fields, but have taken a step back in this area. Some potential solutions include treating infections with multiple antibiotics and offering greater incentives for the pharmaceutical industry to produce these products. Also, more specific therapies directed at toxins the bacteria produce could be used in conjunction with antibiotics to more effectively control infections. Stories about MRSA as a “superbug” are often overblown, causing unnecessary panic among people unlikely to get sick**.** Nevertheless, it rightfully draws attention to a public health problem that requires new solutions. The appropriate response is concern and action. But if we continue to ignore the problem, it can only get worse.

#### No impact to antibiotic resistance.

Sepkowitz 13 [Kent Sepkowitz (Professor of Medicine @ Weill Cornell Medical School, head of Memorial Sloan Ketterings’s infection control program), “Why I’m Not Worried About Dying From a Superbug, and You Shouldn’t Be, Either,” 3-8-13, <http://www.thedailybeast.com-/articles/2013/03/08/why-i-m-not-worried-about-dying-from-a-superbug-and-you-shouldn-t-be-either.html>]

There’s a scary new superbug showing up in hospitals, resistant to all but one aging antibiotic. But Dr. Kent Sepkowitz says your chances of infection are microscopic, and shouldn’t keep you from getting care you need. Pity the poor public-health official: in the midst of an epidemic, he must adopt a soothing avuncular tone of near-boredom, a “we’ve seen this, not to worry” sort of yawn to calm people who otherwise seem ready to run screaming into the streets. But on the other hand, in this day of sequestered public-health funding, he has to raise a major ruckus about some other problem that might happen, swearing that the earth may end soon if we don’t wake up now and face the music. The cavalcade of past get-ready-for-the-big-one hits includes drug-resistant TB, avian flu, swine flu, and drug-resistant gonorrhea among others, each introduced with shrill press releases and snapshots of grim faces peering through microscopes. It is no surprise, therefore, to see the CDC roll out the heavy artillery this week by proclaiming the dangers of the latest superbug. This one is ugly for sure, a resistant-to-almost-everything bacteria that preys on the hospitalized patient. Called carbapenem-resistant Enterobacteriaceae, or CRE, to denote the class of antibiotics (carbapenems) to which it is resistant, and the group of bacterial organisms—Enterobacteriaceae, bacteria that reside in the gut—to which it belongs, CRE is being seen increasingly in hospitals across the U.S. Unheard of before 2001, CRE now is in 181 (4.6 percent) U.S. acute-care hospitals, affecting hundreds of patients. In August 2012, the NIH Clinical Center had a widely reported outbreak from a CRE that killed six of 18 patients, the mortality rate seen in most series. The CDC and other public-health officials are particularly alarmed by this latest wrinkle because the carbapenem class was the last thoroughly modern group of antibiotics with predictable activity against gut bacteria. With the carbapenem hegemony now wobbling, the next (and last) antibiotic is an oldie from the 1960s, pulled from the market then because of concerns about toxicity, but now being used in many hospitals and ICUs to treat CRE infection. If and when CRE becomes resistant to this old-timer, the cupboard is truly bare. This sort of progressive resistance to antibiotics is standard operating procedure for bacteria exposed to high doses of potent antibiotics over time; resistance can and must occur according to the most basic principle of evolution: survival of the fittest. If a billion bacteria are exposed to an antibiotic and just one bacterium, because of a chance mutation, is resistant to the antibiotic while the other near-billion are not, that single organism will survive while the others will die off. The resistant organism will then have the run of the place with enough nutrition to support the billion now-absented brethren, allowing the resistant clone to take root and get in position to spread. We have been here before of course: methicillin-resistant Staphylococcus aureus (MRSA) played through the hospitals and the headlines (and even the National Football League) last decade, alarming the public and spurring new regulations to contain it as well as the application of money, sort of, to develop new weapons. Perhaps because of all the hubbub, MRSA now seems almost quaint and surely not a headline-screaming scourge: mostly contained, a nuisance, a problem, but being dealt with at the right place by the right people. In other words, it has assumed its proper proportion in the world of threats and dangers. The same likely will happen with CRE. More cases will occur, hospitals will make the necessary adjustments suggested by the CDC, specialists will learn their way around the diseases, and eventually the threat and the excitement around it will flatten out. And then the next red-hot development on some other front will emerge rendering the acronym to oblivion. The problem though is this: the mix of steady CDC concern about a real issue that requires attention, a world with infinite capacity for both news and “news,” and a perverse public enjoyment of being frightened has succeeded in little other than scaring the crap out of people who might need medical care. Indeed, hospitals seem to occupy the same imagined place as the Overlook Hotel, the cavernous inn Jack Nicholson prowled in The Shining—the last place on earth a sane person would go. Health care in general and hospitals specifically are viewed these days by just about everyone as a veritable killing field, the place where the two inevitabilities—death and taxes—meet daily as people are fleeced then killed.

#### Pandemics solve nuclear war that spills up to extinction---it’s likely now.

Barry. R. Posen 20. Ford International Professor of Political Science at MIT and Director Emeritus of the MIT Security Studies Program. 4/23/2020. “Do Pandemics Promote Peace?” <https://www.foreignaffairs.com/articles/china/2020-04-23/do-pandemics-promote-peace>. DOA: 9/2/2020. SIR.

What these analysts miss is that COVID-19, the disease caused by the coronavirus, is weakening all of the great and middle powers more or less equally. None is likely to gain a meaningful advantage over the others. All will have ample reason to be pessimistic about their military capabilities and their overall readiness for war. For the duration of the pandemic, at least, and probably for years afterward, the odds of a war between major powers will go down, not up. PAX EPIDEMICA? A cursory survey of the scholarly literature on war and disease appears to confirm Blainey’s observation that pessimism is conducive to peace. Scholars have documented again and again how war creates permissive conditions for disease—in armies as well as civilians in the fought-over territories. But one seldom finds any discussion of epidemics causing wars or of wars deliberately started in the middle of widespread outbreaks of infectious disease. (The diseases that European colonists carried to the New World did weaken indigenous populations to the point that they were more vulnerable to conquest; in addition, some localized conflicts were fought during the influenza pandemic of 1919–21, but these were occasioned by major shifts in regional balances of power following the destruction of four empires in World War I.) That sickness slows the march to war is partly due to the fact that war depends on people. When people fall ill, they can’t be counted on to perform well in combat. Military medicine made enormous strides in the years leading up to World War I, prior to which armies suffered higher numbers of casualties from disease than from combat. But pandemics still threaten military units, as those onboard U.S. and French aircraft carriers, hundreds of whom tested positive for COVID-19, know well. Sailors and soldiers in the field are among the most vulnerable because they are packed together. But even airmen are at risk, since they must take refuge from air attacks in bunkers, where the virus could also spread rapidly. Ground campaigns in urban areas pose still greater dangers in pandemic times. Much recent ground combat has been in cities in poor countries with few or no public health resources, environments highly favorable to illness. Ground combat also usually produces prisoners, any of whom can be infected. A vaccine may eventually solve these problems, but an abundance of caution is likely to persist for some time after it comes into use. Major outbreaks damage national economies, which are the source of military power. The most important reason disease inhibits war is economic. Major outbreaks damage national economies, which are the source of military power. COVID-19 is a pandemic—by definition a worldwide phenomenon. All great and middle powers appear to be adversely affected, and all have reason to be pessimistic about their military prospects. Their economies are shrinking fast, and there is great uncertainty about when and how quickly they will start growing again. Even China, which has slowed the spread of the disease and begun to reopen its economy, will be hurting for years to come. It took an enormous hit to GDP in the first quarter of 2020, ending 40 years of steady growth. And its trading partners, burned by their dependence on China for much of the equipment needed to fight COVID-19, will surely scale back their imports. An export-dependent China will have to rely more on its domestic market, something it has been attempting for years with only limited success. It is little wonder, then, that the International Monetary Fund [forecasts](https://www.youtube.com/watch?v=Oz56lV17s9o) slower growth in China this year than at any time since the 1970s. Even after a vaccine is developed and made widely available, economic troubles may linger for years. States will emerge from this crisis with enormous debts. They will spend years paying for the bailout and stimulus packages they used to protect citizens and businesses from the economic consequences of social distancing. Drained treasuries will give them one more reason to be pessimistic about their military might. LESS TRADE, LESS FRICTION How long is the pacifying effect of pessimism likely to last? If a vaccine is developed quickly, enabling a relatively swift economic recovery, the mood may prove short-lived. But it is equally likely that the coronavirus crisis will last long enough to change the world in important ways, some of which will likely dampen the appetite for conflict for some time—perhaps up to five or ten years. After all, the world is experiencing both the biggest pandemic and the biggest economic downturn in a century. Most governments have not covered themselves with glory managing the pandemic, and even the most autocratic worry about popular support. Over the next few years, people will want evidence that their governments are working to protect them from disease and economic dislocation. Citizens will see themselves as dependent on the state, and they will be less inclined to support adventures abroad. At the same time, governments and businesses will likely try to reduce their reliance on imports of critical materials, having watched global supply chains break down during the pandemic. The result will probably be diminished trade, something liberal internationalists see as a bad thing. But for the last five years or so, trade has not helped improve relations between states but rather fueled resentment. Less trade could mean less friction between major powers, thereby reducing the intensity of their rivalries. In the Chinese context, less international trade could have positive knock-on effects. Focused on growing the domestic economy, and burdened by hefty bills from fighting the virus, Beijing could be forced to table the Belt and Road Initiative, an ambitious trade and investment project that has unnerved the foreign policy establishments of great and middle powers. The suspension of the BRI would soothe the fears of those who see it as an instrument of Chinese world domination. Interstate wars have become relatively rare since the end of World War II. The United States and the Soviet Union engaged in a four-decade Cold War, which included an intense nuclear and conventional arms race, but they never fought each other directly, even with conventional weapons. Theorists debate the reasons behind the continued rarity of great-power conflict. I am inclined to believe that the risk of escalation to a nuclear confrontation is simply too great. COVID-19 does nothing to mitigate such risks for world leaders—and a great deal to feed their reasonable pessimism about the likely outcome of even a conventional war.

### 1NC – Warming

#### Adaptation checks extinction from warming but CO2 prevents famine, collapse of ag, and ice age- those are coming now

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CO2 in the Modern Era The most important question facing a species on Earth today is how long would it have been in the absence of human-caused CO2 emissions until the gradual depletion of CO2 in the atmosphere fell to levels that began to decrease biomass due to starvation, thus signaling the beginning of the end of life on Earth? It is commonly believed that volcanic activity results in massive emissions of CO2 comparable to or greater than human-caused emissions. This is not the case. Whereas the original atmospheric CO2 was the result of massive outgassing from the Earth’s interior, there is no evidence that large volumes of new CO2 were added to the atmosphere during the 140-million-year decline leading to the present era. The eruption of Mount Pinatubo, the largest in recent history, is estimated to have released the equivalent of 2 per cent of the annual human-caused CO2 emissions. Therefore, in the absence of human-caused emissions, it could reasonably be presumed that CO2 levels would have continued to fall as they had done for the previous 140 million years.20 Judging by the timing of the many glacial and interglacial periods during the Pleistocene Ice Age, the next major glaciation period could begin any time. Interglacial periods have generally been of 10,000 years’ duration, and this Holocene interglacial period began nearly 12,000 years ago. In the absence of human-caused CO2 emissions and other environmental impacts, there is no reason to doubt that another major glaciation would have occurred, following the pattern that has been established for at least the past 800,000 years, as established by the European Project for Ice Coring in Antarctica (EPICA),21 and presumably for the past 2.5 million years of the Pletstocene Ice Age. These glaciations have coincided with the Milankovitch cycles.22 (See Figure 5) The Milankovitch cycles are determined by oscillations in the Earth’s orbit and by cycles of the tilt of the Earth toward the sun. The strong correlation between the onset of major periods of glaciation during the past 800,000 years and the Milankovitch cycles has led the majority of earth scientists and climatologists to accept the hypothesis that the major glaciations are tied to the Milankovitch cycles in a causeeffect relationship. For 90 million years from the late Jurassic Period to the Early Tertiary Period, global temperature rose considerably while CO2 levels steadily declined. Then after the Paleocene-Eocene Thermal Maximum, there began a 50-million-year cooling trend in global temperature to the current era. (See Figure 6) The Paleocene-Eocene Thermal Maximum saw an average global temperature [13] FRONTIER CENTRE FOR PUBLIC POLICY as much as 16°C higher than the temperature today. Yet, the ancestors of every species living today must have survived through this period, as they had also survived through previous much colder climates. It is instructive to note that despite the numerous periods of extreme climatic conditions and cataclysmic events, every species alive today is descended from species that survived those conditions. This leads one to question the predictions of mass species extinction and the collapse of human civilization if the average global temperature exceeds a rise of 2°C above today’s level.25 It may seem surprising that the average global temperature could have been 16°C higher in previous ages, as this Figure 5. Graph showing the atmospheric CO2 concentration and temperature from Antarctica for the most recent four interglacial periods, closely tied to the Milankovitch cycles of 100,000 years. This graph is based on data from the 420,000 year record obtained from the Vostok ice cores drilled by Russian scientists.23 Note the gradual nature of the onset of colder temperatures and the rapid warming at the end of the cycle. Note that the peak warming during the most recent interglacial period (the Holocene) is lower than during the previous three interglacial periods.24 Figure 6. Global surface temperature from 65 million YBP showing the major cooling trend over the past 50 million years. While the poles were considerably warmer than they are today, there was much less warming in the tropics, which remained habitable throughout. The Earth is in one of the coldest periods during the past 600 million years.26 [14] FRONTIER CENTRE FOR PUBLIC POLICY would appear to render parts of the Earth that are warm today virtually uninhabitable. The key to understanding this is that when the Earth warms, it does so disproportionally, depending on the latitude. While the Arctic and Antarctic experience considerable warming, there is much less warming in the tropics. Thus, the tropical regions remain habitable while the high latitudes shift from polar to temperate, and during the warmest ages, they shift to a tropical climate. It is clear from the 800,000-year Antarctic ice core record that the coldest periods during major glaciations coincide with the lowest levels of CO2 in the atmosphere. (see Figure 5) The correlation is certainly strong enough during this period to suggest a causal relationship between CO2 and temperature. However, there is disagreement in the literature about which is the cause and which is the effect. Those who ascribe the warming over the past century to greenhouse gas emissions, CO2 in particular, also tend to agree with the position set forth in Al Gore’s An Inconvenient Truth: The Planetary Emergency of Global Warming and What We Can Do about It, that the warming during the interglacial periods is caused by rising CO2 levels.27 However, it is problematic to postulate how the Milankovitch cycles could cause an increase or decrease in atmospheric CO2 levels, whereas it is plausible that the Milankovitch cycles could cause a fluctuation in global temperature due to changes in solar radiation, which in turn could cause either CO2 outgassing from or absorption into the oceans. Indeed, both sets of ice core data from Antarctica show that changes in temperature usually precede changes in CO2 levels, suggesting that temperature change is the cause of change in the level of CO2. 28 Some have suggested that although the onset of warming after a glaciation is caused by the Milankovitch cycles, the subsequent outgassing of CO2 from the ocean then becomes the predominant driver of further warming.29 Presumably, it would also be postulated that the cooling leading to glaciation is triggered by the Milankovitch cycle and then driven by reduced CO2 levels due to ocean absorption. This hypothesis is not proven. It is extremely unlikely or perhaps impossible to imagine how CO2 could have increased from a pre-industrial 280 ppm to 400 ppm in the absence of human-caused emissions. No other species, existing or imagined in the near future, is capable of digging and drilling into the massive deposits of fossil fuels and then burning them so as to release CO2 back into the atmosphere from where it had come in the first place. Many scientists think this increase in atmospheric CO2 is the dominant cause of the slight warming (0.5C) of the atmosphere over the past 65 years. Only time will tell if this is the case. Since the Little Ice Age peaked around 1700, the climate has been warming in fits and starts for about 300 years. It is possible that the most recent warming is a continuation of the longer period of warming that had already begun long before human-caused CO2 emissions could have been a factor. [15] FRONTIER CENTRE FOR PUBLIC POLICY HIGHER CO2 CONCENTRATIONS WILL INCREASE PLANT GROWTH AND BIOMASS It has been well demonstrated that the increase in CO2 in the atmosphere is responsible for increased plant growth on a global scale. Many studies suggest that nearly 25 per cent of human-caused CO2 emissions, or 2.5 Gt of carbon annually, are absorbed by plants, thus increasing global plant biomass. A recent study postulates that up to 50 per cent of human CO2 emissions are absorbed by increased plant growth.30 This has been described as a “greening of the Earth” as CO2 reaches concentrations well above the near-starvation levels experienced during the major glaciations of the Pleistocene.31 The most prestigious Australian science body, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), has shown that CO2 particularly benefits plants that are adapted to dry climates. In higher CO2 environments, they become more efficient at photosynthesis, growing faster without using more water.32 One of the most impressive records comes from an experimental forest in Germany where there is a continuous Figure 8. Change in net primary productivity of vegetation 1982 to 2010. The driest regions, such as Western Australia, sub-Saharan Africa, western India and the Great Plains of North America, show the greatest increase in plant growth.36 Figure 7. Craig Idso,expert on CO2 and author of the CO2Science website34 demonstrating the growth-rate of pine trees under ambient conditions versus the addition of 150 ppm, 300 ppm and 450 ppm CO2. In a higher CO2 world there will be a great increase in the growth of food crops, forests, and wild landscapes around the world. Studies also demonstrate that higher CO2 levels in the oceans will result in increased growth of phytoplankton and other marine plants.35 [16] FRONTIER CENTRE FOR PUBLIC POLICY record of forest growth since 1870. Since 1960, as CO2 emissions began to rise rapidly, the growth rate of individual trees has increased by 32 per cent to 77 per cent. While some of this may be due to the slight increase in temperature since 1960, the much higher growth rate is consistent with laboratory and field studies on the effect of increased CO2 levels on plants.33 It is not widely known that greenhouse operators worldwide inject additional CO2 into their greenhouses in order to increase the growth and yield of their crops. Among horticulturalists, it is well known that this practice can increase growth by 40 per cent or more. This is because the optimum level of CO2 for plant growth is between 1,000 ppm and 3,000 ppm in air, much higher than the 400 ppm in the global atmosphere today.37 Every species on Earth, including our own, is descended from ancestors that thrived in climates with much higher levels of CO2 than are present today. Discussion The debate about climate change has one side insisting that the “science is settled.” Yet, there is no scientific proof that increased CO2 will result in disaster, as CO2 has been higher during most of the history of life on Earth than it is today. On the other hand, it can be stated without a doubt that if CO2 once again falls to the level it was only 18,000 years ago, or lower, there would be a catastrophe unlike any known in human history. We are advised by many scientists that we should be worried about CO2 levels climbing higher when, in fact, we should actually be worried about CO2 levels sinking lower. Atmospheric CO2 Concentrations in the Future If humans had not begun to use fossil fuels for energy, it is reasonable to assume that atmospheric CO2 concentration would have continued to drop as it has done for the past 140 million years. It is also reasonable to assume that the Earth’s climate would continue to fluctuate between relatively long periods of glaciation and relatively short periods of interglacial climate similar to the present climate. Given continued withdrawal of carbon from the atmosphere into the ocean sediments, it would only be a matter of time before CO2 dropped to 150 ppm or lower during a period of glaciation. At the average rate of 32 Kt of carbon lost annually, this would occur in less than two million years from now. In other words, the beginning of the end of most life on planet Earth would begin in fewer years into the future than our genus of primates, Homo, has existed as a distinct taxonomic unit. It is instructive to note that our species is a tropical species that evolved at the equator in ecosystems as warm or warmer than today’s. We were only able to leave the warmth of the tropical climate due to harnessing fire, wearing clothing and building shelters. This allowed us to settle in temperate climes and even Arctic conditions by the sea where domesticated dogs as well as marine mammals made life possible for a very small population. However, we cannot grow food crops in abundance on glaciers or in frozen soil. Moreover, we would not be able to grow much of anything anywhere if the level of CO2 went below 150 ppm. There is a distinct possibility that no amount of additional CO2 will shift the climate out of the next major period of glaciation. This is not a reason to abandon hope but rather to marvel at the fact that we can actually put some of the CO2 needed for life back into the atmosphere while at the same time enjoying abundant, reasonably priced energy from fossil fuels. There has been a gradual net loss of CO2 from the atmosphere during the past 550 million years from approximately 14,000 Gt to approximately 370 Gt at the lowest level during the height of the last glaciation. This is a reduction of nearly 98 per cent of one of the most essential nutrients for life on Earth. In the absence of human CO2 emissions over the past century, it is difficult to imagine how this process of continuous removal of CO2 would be interrupted. Massive volcanism on a scale not seen for more than 200 million years would be required to [17] FRONTIER CENTRE FOR PUBLIC POLICY bring about a reversal in the long-term CO2 trend that has now been achieved by human CO2 emissions. There is no doubt the Earth’s interior has cooled substantially over its roughly 4.6-billion-year existence. This makes massive volcanism an ever-decreasing likelihood. There is no other plausible natural mechanism to return carbon to the global atmosphere in the form of CO2. The present Holocene interglacial has already endured longer than some previous interglacial periods. The Holocene is also somewhat cooler than previous interglacial periods. Of more urgent concern than the possible starvation of life two million years from now is what would happen at the onset of the next glaciation, possibly a relatively short time from now. In the absence of human CO2 emissions, both temperature and CO2 would have dropped to levels that would result in a continuous reduction in plant growth, bringing in climatic conditions similar to or perhaps even more severe than those that occurred in previous glaciations. This would certainly lead to widespread famine and likely the eventual collapse of human civilization. This scenario would not require two million years but possibly only a few thousand. Even if the conditions of the Little Ice Age reoccurred in the next hundreds of years with a human population of nine billion or more, we can be sure the population would not be nine billion for long. There is a strong argument to be made that the Earth is already in a cooling trend that is descending into the next 100,000-year cycle of major glaciation. See Figure 5 and note that in the three preceding interglacial periods, there was a sharp peak followed by a steady downward trend in temperature. The peak temperature in this Holocene interglacial period was during the Holocene Optimum between 5,000 and 9,000 years ago. Since then, the warming peaks have been diminishing, and the cool periods have been colder. The Little Ice Age, which peaked about 300 years ago, was possibly the coldest period of climate since the Holocene Optimum.39 A Paradigm Shift in the Perception of CO2 Independent scientist James Lovelock provides an interesting example of both these contrasting predictions of future catastrophe versus salvation regarding CO2 Figure 9. Reconstructed Greenland mean temperature anomalies (top) and Antarctic CO2 concentration (bottom). Halving the temperature anomalies to allow for polar amplification gives a reasonable approximation of global temperature change in the Holocene. Since the Holocene Optimum began about 9,000 years before present (ka BP), global temperature has fallen by ~1°C, though CO2 concentration rose throughout.38 [18] FRONTIER CENTRE FOR PUBLIC POLICY emissions. He is undoubtedly one of the foremost experts in atmospheric chemistry,40 which is why NASA retained him to design part of the life-detection equipment for the first U.S. Mars landers.41 He concluded from the results that there is no life on Mars. Since publishing his first book on the Gaia hypothesis in 1979, Lovelock became concerned with human civilization’s impact on the global atmosphere.42 He became a strong advocate for reducing CO2 emissions, stating that humans had become a “rogue species” against Gaia (the Earth). He went so far as to state in 2006, ‘“Before this century is over, billions of us will die, and the few breeding pairs of people that survive will be in the Arctic where the climate remains tolerable . . . a broken rabble led by brutal warlords.”’43 Only four years later, in a public speech at London’s Science Museum in 2010, Lovelock recanted, stating, ‘It is worth thinking that what we are doing in creating all these carbon emissions, far from something frightful, is stopping the onset of a new ice age. If we hadn’t appeared on the earth, it would be due to go through another ice age and we can look at our part as holding that up. I hate all this business about feeling guilty about what we’re doing.’44 This abrupt reversal of Lovelock’s interpretation of CO2 is precisely what is required universally to avoid the tragedy of depriving billions of people of reasonably priced, reliable energy, especially those with a need to lift themselves out of poverty. There must be a total paradigm shift from demonizing fossil fuels and fearing CO2 as a toxic pollutant to celebrating CO2 as the giver of life that it is while continuing to use fossil fuels ever-more efficiently. Like Lovelock, we should be hopeful that CO2 will prove to be the moderate warming influence that it is predicted to be in theory. A somewhat warmer world with a higher level of CO2 in the atmosphere would result in a greener world with more plant biomass, higher yields of food crops and trees, a more hospitable climate in high northern latitudes and a possible reduction in the likelihood of another major glaciation. It is highly probable, and ironic, that the existence of life itself may have predetermined its own eventual demise due mainly to the development of CaCO3 as armour plating in marine organisms.45 The fact that humans appear able to reverse this fate temporarily due to our recycling of CO2 back into the atmosphere by burning fossil fuels for energy verges on the miraculous. Nevertheless, there is only so much fossil fuel, and once burned, it is not renewable in the short to medium term. The vast bulk of carbon is sequestered into carbonaceous rocks, mainly as CaCO3. Today, about 5 per cent of human CO2 emissions are derived from converting CaCO3 with heat into CO2 and CaO (lime) to manufacture cement. Therefore, when fossil fuels become scarce in future centuries, and if CO2 again begins to dwindle, we will have the option of producing additional CO2 by burning limestone with nuclear or solar energy, with lime for cement as a useful by-product. This has the potential to extend the existence of a highly productive living Earth into the far distant future. It is clear from the preceding discussion that rather than bringing on a catastrophic climate condition, human CO2 emissions are serving to reinstate a balance to the global carbon cycle. By reversing the 140-million-year decline in atmospheric CO2, we are helping to ensure the continuation of carbon-based life on Earth. [19] FRONTIER CENTRE FOR PUBLIC POLICY CONCLUSION CO2 is essential for life, and twice in the history of modern life there have been periods of steep decline in the concentration of CO2 in the global atmosphere. If this decline were to have continued at the same rate into the future, CO2 would eventually fall to levels insufficient to support plant life, possibly in less than two million years. More worrisome is the possibility in the nearer future that during a future glaciation, CO2 may fall to 180 ppm or lower, thus greatly reducing the growth of food crops and other plants. Human CO2 emissions have staved off this possibility so that at least during a period of glaciation, CO2 would be high enough to maintain a productive agricultural industry. A 140 million year decline in CO2 to levels that came close to threatening the survival of life on Earth can hardly be described as “the balance of nature”. To that extent human emissions are restoring a balance to the global carbon cycle by returning some of the CO2 back to the atmosphere that was drawn down by photosynthesis and CaCO3 production and subsequently lost to deep sediments. This extremely positive aspect of human CO2 emissions must surely be weighed against the unproven hypothesis that human CO2 emissions are mainly responsible for the slight warming of the climate in recent years and will cause catastrophic warming over the coming decades. The fact that the current warming began about 300 years ago during the Little Ice Age indicates that it may at least in part be the continuation of the same natural forces that have caused the climate to change through the ages.

#### Causes nuclear war and chemical weapons – the risk is high and it causes extinction

Cribb 10-3 [Julian Cribb, distinguished science writer with more than thirty awards for journalism, October 3, 2019. “Food or War.” Cambridge University Press. https://www.cambridge.org/core/books/food-or-war/2D6F728A71C0BFEA0CEC85897066DCAF]

Although actual numbers of warheads have continued to fall from its peak of 70,000 weapons in the mid 1980s, scientists argue the danger of nuclear conflict in fact increased in the first two decades of the twenty first century. This was due to the modernisation of existing stockpiles, the adoption of dangerous new technologies such as robot delivery systems, hypersonic missiles, artificial intelligence and electronic warfare, and the continuing leakage of nuclear materials and knowhow to nonnuclear nations and potential terrorist organisations. In early 2018 the hands of the ‘ Doomsday Clock ’ , maintained by the Bulletin of the Atomic Scientists, were re-set at two minutes to midnight, the highest risk to humanity that it has ever shown since the clock was introduced in 1953. This was due not only to the state of the world ’s nuclear arsenal, but also to irresponsible language by world leaders, the growing use of social media to destabilise rival regimes, and to the rising threat of uncontrolled climate change (see below). 12 In an historic moment on 17 July 2017, 122 nations voted in the UN for the first time ever in favour of a treaty banning all nuclear weapons. This called for comprehensive prohibition of “ a full range of nuclear-weapon-related activities, such as undertaking to develop, test, produce, manufacture, acquire, possess or stockpile nuclear weapons or other nuclear explosive devices, as well as the use or threat of use of these weapons. ” 13 However, 71 other countries– including all the nuclear states– either opposed the ban, abstained or declined to vote. The Treaty vote was nonetheless interpreted by some as a promising first step towards abolishing the nuclear nightmare that hangs over the entire human species. In contrast, 192 countries had signed up to the Chemical Weapons Convention to ban the use of chemical weapons, and 180 to the Biological Weapons Convention. As of 2018, 96 per cent of previous world stocks of chemical weapons had been destroyed– but their continued use in the Syrian conflict and in alleged assassination attempts by Russia indicated the world remains at risk. 14 As things stand, the only entities that can afford to own nuclear weapons are nations– and if humanity is to be wiped out, it will most likely be as a result of an atomic conflict between nations. It follows from this that, if the world is to be made safe from such a fate it will need to get rid of nations as a structure of human self-organisation and replace them with wiser, less aggressive forms of self-governance. After all, the nation state really only began in the early nineteenth century and is by no means a permanent feature of self-governance, any more than monarchies, feudal systems or priest states. Although many people still tend to assume it is. Between them, nations have butchered more than 200 million people in the past 150 years and it is increasingly clear the world would be a far safer, more peaceable place without either nations or nationalism. The question is what to replace them with. Although there may at first glance appear to be no close linkage between weapons of mass destruction and food, in the twenty first century with world resources of food, land and water under growing stress, nothing can be ruled out. Indeed, chemical weapons have frequently been deployed in the Syrian civil war, which had drought, agricultural failure and hunger among its early drivers. And nuclear conflict remains a distinct possibility in South Asia and the Middle East, especially, as these regions are already stressed in terms of food, land and water, and their nuclear firepower or access to nuclear materials is multiplying. It remains an open question whether panicking regimes in Russia, the USA or even France would be ruthless enough to deploy atomic weapons in an attempt to quell invasion by tens of millions of desperate refugees, fleeing famine and climate chaos in their own homelands– but the possibility ought not to be ignored. That nuclear war is at least a possible outcome of food and climate crises was first flagged in the report The Age of Consequences by Kurt Campbell and the US-based Centre for Strategic and International Studies, which stated ‘ it is clear that even nuclear war cannot be excluded as a political consequence of global warming ’ . 15 Food insecurity is therefore a driver in the preconditions for the use of nuclear weapons, whether limited or unlimited.

#### Melting Arctic ice is key to Russian Oil – their reserves are running dry and the Arctic is the cure

Daiss 16 Daiss, Tim. I'm an oil markets analyst, journalist and author that has been working out of the Asia-Pacific region for 11 years. I’ve covered oil and energy markets and energy security for Platts, Interfax, NewsBase, Downstream Today, Rigzone, and Energy Tribune as well as providing energy markets analysis for subscription newsletters. "Russia Kicks Up Arctic Oil Drilling As Polar Ice Caps Melt." Forbes, 24 Aug. 2016, www.forbes.com/sites/timdaiss/2016/08/22/a-deal-with-the-devil-russia-kicks-up-arctic-oil-drilling/#bc76133381e6.

Russian oil company Gazprom Neft, the country’s fourth largest oil producer, said two weeks ago that four wells were now in production at the northern Prirazlomnoye field after two more were successfully started. The Prirazlomnoye field is an Arctic offshore oilfield located in the Pechora Sea, south of Novaya Zemlya, Russia. Production from an ice-resistant offshore rig perched in the Pechora passed 43,980 barrels of oil per day (bpd), the company said. Full field development plans call for 32 wells. In March, the company said that it had reached a milestone with production of its 10 millionth barrel of oil at the field, while it revised its production schedule higher to 35 million barrels. Russia needs Arctic oil Russian President Vladimir Putin also opened the Arctic gate marine oil terminal on May 25, which provides access for Russia’s Arctic-sourced crude to both European and Asian markets. Russia’s Arctic development comes as its oil production increases despite a more than two-year long supply glut and plunge in prices. But it also comes as the country’s oil fields mature. In April, Mikå Mered, managing partner at Polarisk, a consultancy specializing in polar issues said that Russia’s onshore oil and gas fields “are depleting and depleting fast.” “If you are the Russian government today and if you want to keep having your oil and gas, you need to start developing offshore Arctic oil and gas fast," he said. The Wilson Center, a Washington-based independent research group, said in a recent report on Arctic drilling that Russia needs these new fields if it is going to maintain oil production levels of at least 10 million bpd by 2020 and beyond. Russia is the world's largest producer of crude oil (including lease condensate) and the second-largest producer of dry natural gas after the U.S., according to the U.S. Energy Information Administration’s (EIA) most recent analysis of Russia’s energy sector. The quandary for Russia, however, as I pointed out in a Forbes post this weekend are Western sanctions. Both U.S. and EU sanctions over Moscow's 2014 annexation of Crimea have also hit the country's ability to finance new energy projects and obtain offshore Arctic and shale (fracking) technology. The EIA said that without such Western involvement and technology, new Arctic resources are unlikely to be developed. “Although this has little immediate effect on Russian production, the sanctions, along with the low world oil prices, have made it more difficult for Russian energy companies to finance new projects,” the EIA report adds. Low oil prices, off from $107 per barrel in July 2014 to now trading in the mid to upper $40s range, forced Russia to cancel as much as 80% of new Arctic projects last year, according to a report by Politico.eu. Russia’s Natural Resources Minister Sergey Donskoy, however, has a different take. In March, he said that as much as 75% of these projects were still moving forward. Melting ice caps Arctic oil drilling has environmentalists scrambling and with good reason. The environmental consequences of a spill would be difficult to control and could have devastating effects on local ecosystems, according to numerous environmental groups. Greenpeace has mounted a multi-media campaign, warning the public of the dangers of Arctic drilling. The environmental group has produced a short (one and a half minute) but poignant video clip, beginning with a cartoon polar bear adrift on a sheet of ice as a British female narrator begins. “The Arctic is melting,” she says, “and as the ice melts the oil companies are moving north.” “They are determined to drill for the same fuels that caused the melting in the first place,” the narrator continues as the video zooms in on the animated bear that by now is scowling as a harsh wind is heard swirling in the background. The video then lists a brief history of accidents and dangers of article drilling, mentioning Shell’s recent unsuccessful offshore drilling attempts in Alaska, a 2011 Gazprom accident and what the narrator calls the dangers of Gazprom’s outdated equipment. The video starts to wrap up with these poignant words: “If we don’t stop them, an Arctic oil spill is inevitable.” Meanwhile, the Greenpeace international website continues the narrative, stating that “Shell is getting increasingly desperate to plunder the Arctic in any way possible. It has recently made a deal with the devil: partnering with Russian oil and gas giant Gazprom to access the Arctic through Russia.” Melting Arctic ice also makes it easier for oil companies to drill for Arctic oil. On Friday, NASA released a video of melting polar ice caps. Record-breaking warm temperatures in the first half of 2016 have primed the Arctic for another summer of low sea ice cover, the video states. Next year, or the year after, the central Arctic would be free from ice, Peter Wadhams, a professor of ocean physics at Cambridge since 2001, said over the weekend. “You will be able to cross over the north pole by ship. There will still be about a million square kilometres of ice in the Arctic in summer but it will be packed into various nooks and crannies along the Northwest Passage and along bits of the Canadian coastline,” he said. Russia, however, is not likely to be deterred in its Arctic oil ambitions – too much money is at stake . As much as half of all state revenue in Russia is derived from oil and gas – though the government cites a much lower figure. A July Bloomberg report said that three northern oil terminals on Russia’s northern coast in the Arctic circle is already exporting as much crude oil as Libya -- and that flow could double in the next five years. The three terminals combined handled a combined 230,000 bpd in the second quarter of 2016, almost doubling from 130,000 barrels as recently as January last year, with projections for that to increase to around 400,000 bpd by 2020 – oil and revenue that Russia will exploit to its fullest. The Arctic is estimated to contain about 90 billion barrels of undiscovered oil, 17 trillion cubic feet of undiscovered gas and 44 billion barrels of natural gas liquids, making up, respectively, 16%, 30% and 26% of the world's individual undiscovered hydrocarbon resources, according to the U.S. Geological Survey (USGS).

#### Decline causes worse aggression – it’s NoKo 2.0

Fisher 14 [Max Fisher, Vox. The worse Russia's economy gets, the more dangerous Putin becomes. December 17, 2014. https://www.vox.com/2014/12/17/7401681/russia-putin-ruble]

You might reasonably conclude that the destruction of Russia's economy is great news for the United States of America. After all, won't it humble Vladimir Putin, forcing him to finally back out of his disastrous Ukraine invasion, soften his growing hostility toward Europe and the US, and generally ratchet down the brinksmanship and aggression that have made him so troublesome?

Actually, it's the opposite. The odds are that Russia's freefalling economy will make Putin even more aggressive, more unpredictable, and less willing to compromise. The weaker that Russia becomes, the more dangerous it will get, and that's terrible news for everyone, including the US.

It is precisely because the cratering economy is weakening Putin that it will force him to bolster his rule, which he will almost certainly do by drumming up nationalism, foreign confrontations, and state propaganda. Russia, already hostile and isolated, is likely to become even more so, worsening both its behavior abroad and the already-significant economic suffering of regular Russians. The country's propaganda bubble will further seal off Russians from the outside world, telling them that Russia's decline is the fault of Western aggression that they must rally against.

In all, this effect is starting to look something like the North Koreaification of Russia. That does not mean that Russia is about to become or will ever be as isolated, hostile, or aggressive as North Korea, but it only has to edge a little bit in that direction to bring terrible consequences for the world and for Russians themselves.

**Collapse causes Putin lashout and nuke war**

**Thompson 15** (Loren Thompson-Lexington Institute strategic consultant and Georgetown government PhD , “Why Putin's Russia Is The Biggest Threat To America In 2015”, <http://www.forbes.com/sites/lorenthompson/2015/01/02/why-putins-russia-is-the-biggest-threat-to-america-in-2015/2/> , 1-2-15)

Like the stock market crashes that periodically wipe out so many fortunes, military crises are hard to predict. Washington’s track record as a seer of future threats is remarkably poor. From the bombing of Pearl Harbor in the 1940s to North Korea’s invasion of the South in the 1950s to the Cuban Missile Crisis in the 1960s to the collapse of South Vietnam in the 1970s to the breakup of the Soviet empire in the 1980s to Iraq’s invasion of Kuwait in the 1990s to the 9-11 attacks and rise of ISIS in the new millennium, America’s policy elite never seems to see looming danger until it is too late. So don’t be surprised if the economic sanctions Washington has led the West in imposing on Russia look like a bad idea a year from now. At the moment, a combination of sanctions and plummeting oil prices seems to be dealing the government of President Vladimir Putin a heavy blow — just retribution, many say, for its invasion of Ukraine and annexation of Crimea last year. But as Alan Cullison observed in the Wall Street Journal this week, sanctions sometimes provoke precisely the opposite response from what policymakers hope. In Russia’s case, that could mean a threat to America’s survival. Let’s briefly consider how Russia’s current circumstances could lead to dangers that dwarf the challenges posed by ISIS and cyber attacks. A paranoid political culture. Russia’s moves on Ukraine look to many Westerners like a straightforward case of aggression. That is not the way they look to Vladimir Putin’s inner circle of advisors in Moscow, nor to most Russians. That inner circle is drawn mainly from the Russian security services — Putin himself spent 16 years in the KGB — and to them the revolution in Ukraine was a U.S.-backed coup aimed at weakening Russia. Putin describes the Crimea as a birthplace of Russian culture, and his government has repeatedly warned against the expansion of Western economic and political influence into a region historically regarded as Moscow’s sphere of influence. Putin relies heavily on the Kremlin bureaucracy to provide him with intelligence (he avoids the Internet), so his briefings tend to reinforce the view that Moscow was forced to intervene in Ukraine by Western subversion aimed at undermining his **rule. A nuclear arsenal on hair trigger**. Between the two of them, Russia and America control over 90% of the world’s nuclear weapons. However, Moscow is far more dependent on its nuclear arsenal for security, because it cannot afford to keep up with U.S. investments in new warfighting technology. So Russian military doctrine states that it might be necessary to use nuclear weapons to combat conventional attacks from the West. **Many Russians think that attacks on their country are a real possibility, and that their nuclear deterrent — which consists mainly of silo-based missiles in known locations — might have to be launched quickly to escape a preemptive strike**. Moscow staged a major nuclear exercise during last year’s Ukraine crisis in which it assumed missiles would have to be launched fast on warning of a Western attack. A senior Russian officer has stated that 96% of the strategic rocket force can be launched within minutes. **A collapsing** economy. Much of Putin’s popularity within Russia is traceable to the impressive recovery of the post-Soviet economy on his watch. Since he came to power in 2001, the country’s gross domestic product has grown sixfold, greatly increasing the size and affluence of the Russian middle class. But that growth has been based in large part on the export of oil and gas to neighboring countries at a time when energy prices reached record highs. Now the price of oil has fallen at the same time that economic sanctions are beginning to bite. The ruble lost nearly half its value against the dollar last year, and the economy has begun to shrink. Putin blames sanctions for 25-30% of current economic hardships. Many Westerns believe a prolonged recession would weaken Putin’s support, but **because he can blame outsiders, economic troubles** might actually strengthen his hand and accelerate the trend toward **authoritarian rule. A deep sense of grievance**. Blaming outsiders for domestic troubles has a long pedigree in Russian political tradition, and it feeds into a deep-seated sense that Russia has been deprived of its rightful role in the world by the U.S. and other Western powers. Russia may have little past experience with democracy, but it was a major power for centuries prior to the collapse of communism. Like authoritarian rulers in other nations, Putin has built his political base by appealing to nationalism, fashioning a revisionist view of recent events in which Russia is the victim rather that the author of its own misfortunes. has called the break-up of the Soviet Union a tragedy of epic proportions, and apparently really believes it. **By tapping into a deep vein of resentment in Russian political culture, Putin has created a broad constituency for standing up to outsiders even if it means prolonged economic hardship and the danger of war**. A vulnerable antagonist. Federal Reserve chair Janet Yellen says **America faces little danger from Russia’s current troubles**, but that’s because she thinks in economic terms. In a broader sense, America potentially is in great danger because Putin and his advisors really believe they are the target of a Western plot to weaken their country. **The biggest concern is that some new move by Russia along its borders degenerates into a crisis where Moscow thinks it can improve its tactical situation by threatening local use of nuclear weapons, and then the crisis escalates**. At that point U.S. policymakers would have to face the reality that (1) they are unwilling to fight Russia to protect places like Ukraine, and (2) they have no real defenses of the American homeland against a sizable nuclear attack. In other words, the only reason Washington seems to have the upper hand right now is because it assumes leaders in Moscow will act “rationally.” The unspoken wisdom in Washington today is that if nobody gives voice to such fears, then they don’t need to be addressed. That’s how a peaceful world stumbled into the First World War a century ago — by not acknowledging the worst-case potential of a crisis in Eastern Europe — and the blindness of leaders back then explains most of what went wrong later in the 20th Century. If we want to avoid the risk of reliving that multi-generation lesson, then U.S. policymakers need to do something more than simply wait for Putin to crack. That day will never come. In the near term, Washington needs to work harder to defuse tensions, including taking a more serious look at the history that led to Moscow’s move on Crimea. Over the longer term, Washington needs to get beyond its dangerous aversion to building real defenses against long-range nuclear weapons, because it is just a matter of time before some dictator calls America’s bluff.

#### Extinction from warming requires 12 degrees, far greater than their internal link, and intervening actors will solve before then

Sebastian Farquhar 17, master’s degree in Physics from the University of Oxford, leads the Global Priorities Project (GPP) at the Centre for Effective Altruism, et al., 2017, “Existential Risk: Diplomacy and Governance,” https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf

The most likely levels of global warming are very unlikely to cause human extinction.15 The existential risks of climate change instead stem from tail risk climate change – the low probability of extreme levels of warming – and interaction with other sources of risk. It is impossible to say with confidence at what point global warming would become severe enough to pose an existential threat. Research has suggested that warming of 11-12°C would render most of the planet uninhabitable,16 and would completely devastate agriculture.17 This would pose an extreme threat to human civilisation as we know it.18 Warming of around 7°C or more could potentially produce conflict and instability on such a scale that the indirect effects could be an existential risk, although it is extremely uncertain how likely such scenarios are.19 Moreover, the timescales over which such changes might happen could mean that humanity is able to adapt enough to avoid extinction in even very extreme scenarios. The probability of these levels of warming depends on eventual greenhouse gas concentrations. According to some experts, unless strong action is taken soon by major emitters, it is likely that we will pursue a medium-high emissions pathway.20 If we do, the chance of extreme warming is highly uncertain but appears non-negligible. Current concentrations of greenhouse gases are higher than they have been for hundreds of thousands of years,21 which means that there are significant unknown unknowns about how the climate system will respond. Particularly concerning is the risk of positive feedback loops, such as the release of vast amounts of methane from melting of the arctic permafrost, which would cause rapid and disastrous warming.22 The economists Gernot Wagner and Martin Weitzman have used IPCC figures (which do not include modelling of feedback loops such as those from melting permafrost) to estimate that if we continue to pursue a medium-high emissions pathway, the probability of eventual warming of 6°C is around 10%,23 and of 10°C is around 3%.24 These estimates are of course highly uncertain. It is likely that the world will take action against climate change once it begins to impose large costs on human society, long before there is warming of 10°C. Unfortunately, there is significant inertia in the climate system: there is a 25 to 50 year lag between CO2 emissions and eventual warming,25 and it is expected that 40% of the peak concentration of CO2 will remain in the atmosphere 1,000 years after the peak is reached.26 Consequently, it is impossible to reduce temperatures quickly by reducing CO2 emissions. If the world does start to face costly warming, the international community will therefore face strong incentives to find other ways to reduce global temperatures.

### 1NC – Health Diplomacy

#### Health Diplomacy fails—foreign policy interests, colonialism, competition, and doesn’t affect science

**Flink 20** — (Tim Flink, Dr. Tim Flink is a postdoctoral researcher and lecturer in science policy research and social studies of science, based at Humboldt-Universität zu Berlin and at the German Center of Higher Education Research and Science Studies (DZHW). Prior to his academic engagement, he worked as the personal board assistant to the EU Liaison Office of the German Research Organisations in Brussels, especially supporting the German Research Foundation’s (DFG) President and Secretary General in representing the DFG’s international interests vis-à-vis the EU’s institutions. He published the first comprehensive social history and policy analysis of the European Research Council and gathered expertise in many other science policy related fields, including science diplomacy (the first cross-country comparative study being carried out with Ulrich Schreiterer from 2008-2010), academic spin-offs, and university governance and incentivisation regimes of researchers. As a policy expert, Tim has shared his knowledge with actors from various institutions, such as the European Commission’s DG RTD, the ERC’s executive agency and scientific council, the German Foreign Ministry and the Ministry for Education and Research, the Federal Government’s Expert Commission on Research and Innovation (EFI), the German Research Foundation and the Academic Exchange Service (DAAD), to name but a few. In S4D4C, Tim Flink led the work package on the ‘Conceptual framework’; he is the author of several academic and policy papers such as Policy Brief: Why science diplomacy needs evaluative backing, Romancing science for global solutions, Critical perspective on Science Diplomacy in The Hague Journal of Diplomacy and the 2018 Policy brief on science diplomacy in the European Union. He is also the author of the S4D4C case study ‘Joint international research programming as a case of science diplomacy’ and contributed to the transversal analysis of cases. Together with the DZHW team he also acted as the local host for the 2nd Networking Meeting ‘Towards a European Science Diplomacy Roadmap’ in Berlin – about which he is speaking HERE in an interview together with Elke Dall, published as part of S4D4C’s researcher’s voices series. His publications are also made freely available here., “The Sensationalist Discourse of Science Diplomacy: A Critical Reflection“, Brill, 8-1-2020, Available Online at https://brill.com/view/journals/hjd/15/3/article-p359\_7.xml?language=en, accessed 10-4-2021, HKR-AR)

The only problem is that such an idealised image of science hardly matches with lifeworld realities, and it does not even need 50 years of the Social Studies of Science to continuously prove that science — just as any other social system — may also contain chauvinism, fierce competition, vanity and reputation games, misconduct and unsavoury entanglements with nefarious business and political interests. To provide only a few examples with regard to its international dimensions, editors of the scientific journal Nature23 recently criticised that researchers and especially reviewers would have increasingly devalued the works of ‘others’ on the basis of national-cultural stereotypes.24 The US Department of Health’s Office for Research Integrity (ORI) even openly accuses and warns against practices of plagiarism that would be common among young scientists from ‘non-Western cultures’ (i.e., Central and Eastern European, Latin American, Middle Eastern and Southeast Asian).25 But also international scientific engagement under the heading of science diplomacy was held ethically problematic, as it also **led to parachute science**.26

That large parts of the discourse on science diplomacy sensationally portrays scientists as unpolitical, cosmopolitan and truth-seeking collaborators, however, seems not naive but strategic. And yet, the question is whether such raised expectations, as provided by promoters of this discourse, are not greatly overdrawn — and what happens, if they get disappointed?

### 1NC – India Soft Power

#### Indian’s soft power is worthless but directly trades off with more useful hard power – short term lunges are enough to trigger our impact

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That soft power is an extremely important component of foreign policy is a no-brainer. But it is, at best, one of the necessary conditions or components of foreign policy. Without hard power (both military and economic) and the ability to exercise “smart power” — a term first coined by the US diplomat Joseph Nye Jr. — soft power alone itself will never be sufficient enough to achieve foreign policy objectives. In India, however, the focus is more on projecting and leveraging soft power i.e. music, films, sports, art, culture, ancient wisdom, civilisational values etc, so as to occupy a place on the global high table. The latest example of this is the production of music videos of Mahatma Gandhi’s favourite bhajan — Vaishnao Janato. Indian missions across the world were instructed to rope in top stars from their respective countries and get them to sing the bhajan as a part of the commemoration of Gandhiji’s 150th birth anniversary. While there is nothing intrinsically wrong with such a project, given the security, strategic and economic challenges that confront Indian foreign policy, should be getting this bhajan sung by foreign stars have been a priority for Indian diplomats? Was the expense this would have incurred — monetary as well as in terms of time and energy of diplomats — justified? What are the takeaways of this somewhat batty idea in terms of even projecting soft power? How many people around the world, and I don’t even mean influential persons, were influenced or swayed by the rendition of this bhajan by foreign singers? How many people other than Indians had even heard this bhajan? How does the bhajan advance any of India’s important or vital interests in other countries? The current dispensation led by Prime Minister Narendra Modi has managed to engage rest of the world and advance India’s relations with almost all the important countries in the world. Where necessary, it has shown steely resolve in upholding Indian interests. To the Prime Minister’s credit, he hasn’t allowed personal slights or ego clashes to distract him or deflect him from pursuing India’s interests. He has ignored Trump mimicking him or other Western countries unfairly denying him a visa before he became Prime Minister. He has certainly injected energy and confidence in how India interacts and engages other countries. And yet, the obsession with soft power and reclaiming India’s stature as a “vishwa guru” (what does that mean anyway?) has frittered away or at least expended energies that could be better utilised elsewhere. The ruling party’s reverence for Deen Dayal Upadhyay is understandable. But let’s face it, there is nothing pathbreaking or revolutionary in what he said. What did he say, other than the typical confused socialistic mumbo-jumbo of his times? Will holding international symposiums, seminars, conferences to propagate D.D. Upadhyay’s thoughts really make any difference? Isn’t it a colossal waste of resources? Similarly, with Yoga, the world recognises and practises yoga not because the Modi government is promoting it or because there is an international Yoga Day, but because it is truly an exceptional form of exercise. Should the government then needlessly be going bonkers in celebrating Yoga Day all over the world? While every government must be permitted or forgiven, its peculiarities and peccadilloes, the Congress party apparatchiks cannot open their mouth without first singing paeans of their first family, and pretentious socialists must take Ram Manohar Lohia or J.P. Narayan’s name to justify their whacky policies and politics. The problem is that overtly focusing on these “events” and the need for showing performance in organising these events has become an end in itself for civil servants. Thus, it is that the High Commissioner in Islamabad, unlike his counterparts from other countries, doesn’t feel that merely meeting a newly (s)elected Prime Minister of Pakistan is enough; he must create a splash by doing the most cliched thing possible — presenting a cricket bat with signatures of the current Indian team. This gesture was apparently supposed to soften the nominee of the Pakistan Army. Seriously? There exists a number of examples of this dumbing down of diplomacy where form has taken precedence and priority over substance. While it is important that India and Indians take pride in their astounding accomplishments in ancient times, it is even more critical to recognise that India today cannot rest on its laurels from the past. India might have been a “vishwa guru” a millennia or more ago, but today, it has more to learn from both, its friends, as well as its enemies and adversaries. And it (India) has very little to teach them. By overdoing soft power, India isn’t going to be able to fix the challenges of today, nor will it be able to exploit and benefit from the opportunities of today and tomorrow. For more than four decades after independence, India exercised soft power but had very little heft in terms of hard power, or in some cases, lesser economic power. India was the defender of all lost causes, an irritant on the international stage that pontificated, moralised, even hectored others. Sure, India was the toast of all the countries that didn’t matter — a bit like Venezuela on steroids (okay, that’s a bit over the top, but you get the drift) which today is the toast of rootless, clueless and even brainless Left-Liberal types who saw Hugo Chavez, the man who ruined his country, as a revolutionary and anti-imperialist icon. India really started being noticed after the economic reforms of 1990-91, the architect of which wasn’t Manmohan Singh, but his boss, P.V. Narasimha Rao. Suddenly the world rediscovered India’s potential. It was the Indian techies and scholars in Western universities and companies that made people in other parts of the world sit up and take notice of this awakening giant. While Pakistan was being noticed for its jihadist policies (a number of Hollywood films had a Pakistani character involved in terrorism or making sinister plans for a WMD attack), India was being feted for its geeks, the industriousness of its people, their commitment to family and education, and their adherence to laws of the lands in which they lived. All this wasn’t the outcome of some publicity campaign or some bureaucracy-driven scheme to promote India. It happened organically and was the result of hard work, perseverance and investment in things that matter, education being the most important one of them. Packaging is important, even necessary, in making an impression in the world. But it is grossly insufficient if the product being sold isn’t good enough, or for that matter useful. Instead of frittering away the gains we have made over the years by behaving as though we have arrived or even acting as a ‘vishwa guru’ and world leader, India (and its leaders) need to realise that it has an enormous distance to travel, many mountains to climb, many seas to traverse, many storms and minefields to avoid and confront before it can claim to be a genuine ‘vishwa guru’. And when that stage comes, India will not need to announce its arrival, other will do it for India. Until then, Indians need to get serious, hunker down and do the hard work needed to rebuild India — fixing our education system, fixing our legal and judicial system, making governance more effective, responsive, sensitive, giving impetus to productive agents in the economy (the entrepreneur, industrialist, farmer), fixing our infrastructure, fixing our crumbling, overstretched cities, its an endless list. Neither bhajans, nor yoga days will do this for India. If anything, shifting focus from the important and urgent things to the cosmetic and perceptual stuff will only make it more difficult for India to make its tryst with its destiny.