## 1NC – CP

#### CP: States should:

#### Fund an increase the mining of water resources from asteroids by private entities

#### Declare that the appropriation of outer space through the production of space debris by private entities is just

#### Climate change makes water shortages inevitable – that causes hydro-political conflict escalation which goes nuclear

Harvey 8/17 [(Fiona, the Guardian's environment correspondent, won the Foreign Press Association award for Environment Story of the Year and the British Environment and Media Awards journalist of the year) “Global water crisis will intensify with climate breakdown, says report,” The Guardian, 8/17/2021] JL

Mark’s words should be a call to attention, and a call to action. The plight of farmers in Australia illustrates a larger reality: As planetary temperatures continue to increase and rainfall patterns shift due to human-caused climate disruption, our ability to grow crops and have enough drinking water will become increasingly challenged, and the outlook is only going to worsen.

The most recent United Nations Intergovernmental Panel on Climate Change report warned of increasingly intense droughts and mass water shortages around large swaths of the globe.

But even more conservative organizations have been sounding the alarm. “Water insecurity could multiply the risk of conflict,” warns one of the World Bank’s reports on the issue. “Food price spikes caused by droughts can inflame latent conflicts and drive migration. Where economic growth is impacted by rainfall, episodes of droughts and floods have generated waves of migration and spikes in violence within countries.”

Meanwhile, a study published in the journal Global Environmental Change, looked at how “hydro-political issues” — including tensions and potential conflicts — could play out in countries expected to experience water shortages coupled with high populations and pre-existing geopolitical tensions.

The study warned that these factors could combine to increase the likelihood of water-related tensions — potentially escalating into armed conflict in cross-boundary river basins in places around the world by 74.9 to 95 percent. This means that in some places conflict is practically guaranteed.

These areas include regions situated around primary rivers in Asia and North Africa. Noted rivers include the Tigris and Euphrates, the Indus, the Nile, and the Ganges-Brahmaputra.

Consider the fact that 11 countries share the Nile River basin: Egypt, Burundi, Kenya, Eritrea, Ethiopia, Uganda, Rwanda, Sudan, South Sudan, Tanzania and the Democratic Republic of Congo. All told, more than 300 million people already live in these countries, — a number that is projected to double in the coming decades, while the amount of available water will continue to shrink due to climate change.

For those in the US thinking these potential conflicts will only occur in distant lands — think again. The study also warned of a very high chance of these “hydro-political interactions” in portions of the southwestern US and northern Mexico, around the Colorado River.

Potential tensions are particularly worrisome in India and Pakistan, which are already rivals when it comes to water resources. For now, these two countries have an agreement, albeit a strained one, over the Indus River and the sharing of its water, by way of the 1960 Indus Water Treaty.

However, water claims have been central to their ongoing, burning dispute over the Kashmir region, a flashpoint area there for more than 60 years and counting.

The aforementioned treaty is now more strained than ever, as Pakistan accuses India of limiting its water supply and violating the treaty by placing dams over various rivers that flow from Kashmir into Pakistan.

In fact, a 2018 report from the International Monetary Fund ranked Pakistan third among countries facing severe water shortages. This is largely due to the rapid melting of glaciers in the Himalaya that are the source of much of the water for the Indus.

To provide an idea of how quickly water resources are diminishing in both countries, statistics from Pakistan’s Islamabad Chamber of Commerce and Industry from 2018 show that water availability (per capita in cubic meters per year) shrank from 5,260 in 1951, to 940 in 2015, and are projected to shrink to 860 by just 2025.

In India, the crisis is hardly better. According to that country’s Ministry of Statistics (2016) and the Indian Ministry of Water Resources (2010), the per capita available water in cubic meters per year was 5,177 in 1951, and 1,474 in 2015, and is projected to shrink to 1,341 in 2025.

Both of these countries are nuclear powers. Given the dire projections of water availability as climate change progresses, nightmare scenarios of water wars that could spark nuclear exchanges are now becoming possible.

#### Asteroid mining solves water access – only NEOs are sufficiently proximate and hydrated

Tillman 19 [(Nola Taylor, has been published in Astronomy, Sky & Telescope, Scientific American, New Scientist, Science News (AAS), Space.com, and Astrobiology magazine, BA in Astrophysics) “Tons of Water in Asteroids Could Fuel Satellites, Space Exploration,” Space, 9/29/2019] JL

When it comes to mining space for water, the best target may not be the moon: Entrepreneurs' richest options are likely to be asteroids that are larger and closer to Earth.

A recent study suggested that roughly 1,000 water-rich, or hydrated, asteroids near our planet are easier to reach than the lunar surface is. While most of these space rocks are only a few feet in size, more than 25 of them should be large enough to each provide significant water. Altogether, the water locked in these asteroids should be enough to fill somewhere around 320,000 Olympics-size swimming pools — significantly more than the amount of water locked up at the lunar poles, the new research suggested.

Because asteroids are small, they have less gravity than Earth or the moon do, which makes them easier destinations to land on and lift off from. If engineers can figure out how to mine water from these space rocks, they could produce a source of ready fuel in space that would allow spacecraft designers to build refuelable models for the next generation of satellites. Asteroid mining could also fuel human exploration, saving the expense of launching fuel from Earth. In both cases, would-be space-rock miners will need to figure out how to free the water trapped in hydrated minerals on these asteroids.

"Most of the hydrated material in the near-Earth population is contained in the largest few hydrated objects," Andrew Rivkin, an asteroid researcher at Johns Hopkins University Applied Physics Research Laboratory in Maryland, told Space.com. Rivkin is the lead author on the paper, which estimated that near Earth asteroids could contain more easily accessible water than the lunar poles.

According to the United Nations Office for Outer Space Affairs, more than 5,200 of the objects launched into space are still in orbit today. While some continue to function, the bulk of them buzz uselessly over our heads every day. They carry fuel on board, and when they run out, they are either lowered into destructive orbits or left to become space junk, useless debris with the potential to cause enormous problems for working satellites. Refueling satellites in space could change that model, replacing it with long-lived, productive orbiters.

"It's easier to bring fuel from asteroids to geosynchronous orbit than from the surface of the Earth," Rivkin said. "If such a supply line could be established, it could make asteroid mining very profitable."

Hunting for space water from the surface of the Earth is challenging because the planet's atmosphere blocks the wavelength of light where water can be observed. The asteroid warming as it draws closer to the sun can also complicate measurements.

Instead, Rivkin and his colleagues turned to a class of space rocks called Ch asteroids. Although these asteroids don't directly exhibit a watery fingerprint, they carry the telltale signal of oxidized iron seen only on asteroids with signatures of water-rich minerals, which means the authors felt confident assuming that all Ch asteroids carry this rocky water.

Based on meteorite falls, a previous study estimated that Ch asteroids could make up nearly 10% of the near-Earth objects (NEOs). With this information, the researchers determined that there are between 26 and 80 such objects that are hydrated and larger than 0.62 miles (1 km) across.

Right now, only three NEOs have been classified as Ch asteroids, although others have been spotted in the asteroid belt. Most NEOs are discovered and observed at wavelengths too short to reveal the iron band that marks the class. Carbon-rich asteroids, which include Ch asteroids and other flavors, are also darker than the more common stony asteroids, making them more challenging to observe.

Although Ch asteroids definitely contain water-rich minerals, that doesn’t necessarily mean that they will always be the best bet for space mining. It comes down to risk. Would an asteroid-mining company rather visit a smaller asteroid that definitely has a moderate amount of water, or a larger one that could yield a larger payday but could also come up dry?

"Whether getting sure things with no false positives, like the Ch asteroids, is more important or if a greater range of possibilities is acceptable with the understanding that some asteroids will be duds is something the miners will have to decide," Rivkin said.

In addition to estimating the number of large, water-rich asteroids might be available, the study also found that as many as 1,050 smaller objects, roughly 300 feet (100 meters) across, may also linger near Earth. Their small bulk will make them easier to mine because their low gravity will require less fuel to escape from, but they will produce less water overall, and Rivkin expects that the handful of larger space rocks will be the first targets.

"It seems likely that the plan for these companies will be to find the largest accessible asteroid with mineable material with the expectation that it will be more cost-effective than chasing down a large number of smaller objects," Rivkin said. "How 'accessible' and 'mineable material' and 'cost-effective' are defined by each company is to be seen."

#### It competes

Scoles 15 [(Sarah Scoles, freelance science writer, contributor at Wired and Popular Science, author of the books Making Contact and They Are Already Here) “Dust from asteroid mining spells danger for satellites,” New Scientist, May 27, 2015, https://www.newscientist.com/article/mg22630235-100-dust-from-asteroid-mining-spells-danger-for-satellites/] TDI

* Study this is citing – Javier Roa, Space Dynamic Group, Applied Physics Department, Technical University of Madrid. Casey J Handmer, Theoretical Astrophysics, California Institute of Technology. Both PhD Candidates. “Quantifying hazards: asteroid disruption in lunar distant retrograde orbits,” arXiv, Cornell University, May 14, 2015, https://arxiv.org/pdf/1505.03800.pdf

NASA chose the second option for its Asteroid Redirect Mission, which aims to pluck a boulder from an asteroid’s surface and relocate it to a stable orbit around the moon. But an asteroid’s gravity is so weak that it’s not hard for surface particles to escape into space. Now a new model warns that debris shed by such transplanted rocks could intrude where many defence and communication satellites live – in geosynchronous orbit.

## 1NC – DA

#### Xi is consolidating unprecedented political power – that’s only possible with strong PLA support

Chang 21 [(Gordon, columnist, author and lawyer, has given briefings at the National Intelligence Council, the CIA, and the State Department, JD from Cornell Law School) “China Is Becoming a Military State,” Newsweek, 1/14/2021] JL

At this moment, the Communist Party is taking back power from all others in society, including the State Council, and the military is gaining influence inside Party circles.

Why is the People's Liberation Army making a comeback? The answer lies in succession politics.

Xi Jinping was selected the top leader because he was not identified with any of the main factional groupings—like the Communist Youth League of Hu Jintao or the Shanghai Gang of Jiang—that dominated Party politics. Xi, in short, was the least unacceptable choice to the Party's squabbling factional elders.

Xi, once chosen, apparently decided that in order to rule, he needed a base, so he made certain officers the core of his support. As longtime China watcher Willy Lam told Reuters in 2013, Xi Jinping's faction is the military.

And with the help of the military, Xi has accumulated almost unprecedented political power, ending the Party's two-decade-old consensus-driven system and replacing it with one-man rule.

As Wang, a professor at the Georgia Institute of Technology, notes, Xi, with the amendments to the National Defense Law, is demonstrating his power of "leading everything and everyone." He is wrapping that effort in a "rule by law" move that is formalizing his perch at the top of the Chinese political system.

How is Xi using his newfound power? There is a hint in the National Defense Law amendments. These changes, Fisher tells us, "increase the powers of the CMC to mobilize the civilian sector for wartime and to better authorize the CMC to engage in foreign military exercises to defend China's 'development interests.'" As such, the changes "point to China's ambition to achieve 'whole nation' levels of military mobilization to fight wars, and give the CMC formal power to control the future Chinese capabilities for global military intervention."

"The revised National Defense Law also embodies the concept that everyone should be involved in national defense," reports the Communist Party's *Global Times*, summarizing the words of an unnamed CMC official. "All national organizations, armed forces, political parties, civil groups, enterprises, social organizations and other organizations should support and take part in the development of national defense, fulfill national defense duties and carry out national defense missions according to the law."

That sounds like Xi is getting ready to pick even more fights with neighbors—and perhaps the United States. On January 5, he ordered People's Liberation Army generals and admirals to be prepared to "act at any second."

Why would Xi want to start a war? "This is really indicative of there being instability in China, and Mr. Xi seeking to consolidate power around himself. ...The new National Defense Law essentially removes the alternative power base of the premier of the State Council, in this case Li Keqiang, from interfering with Mr. Xi's own power ambitions," said Charles Burton of the Ottawa-based Macdonald-Laurier Institute to John Batchelor, the radio host, earlier this month. As Burton noted, the amendments to the National Defense Law undermine Premier Li Keqiang, the head of the State Council and long-standing rival to Xi.

"I think this really gives the green light for him to dispatch the military on any pretext that he feels is necessary to defend his power," Burton says. "China is becoming a military state."

#### The plan alienates the PLA – they view space dominance as the linchpin of China’s legitimacy – specifically, public-private tech development is key

Economic Times 20 [(Economic Times, Indian daily newspaper, internally cites Dean Cheng, Senior Research Fellow at the Heritage Foundation and the Davis Institute for National Security and Foreign Policy, former analyst in the International Security and Space Program at the Office of Technology Assessment, BA in Politics from Princeton University) “China attempting to militarize space as it seeks to modernize its military power,” 8/31/2020] JL

The Jamestown Foundation, a US think-tank, hosted a webinar on August 19 entitled "China's Space Ambitions: Emerging Dimensions of Competition." One presenter, Dean Cheng, Senior Research Fellow at The Heritage Foundation, noted that Beijing's space programme is linked to China's central concept of comprehensive national power. "This is basically how the Chinese think about how they rack and stack, how they compare with other countries."

China recognises that military power is important, but it is not the only factor in being a great power. Cheng drew a parallel with the former USSR, where military power alone did not ensure survival of that communist state. Other comprehensive national power factors are political unity, economic power, diplomatic strength, science and technology, and even culture. "Space touches every one of these aspects in comprehensive national power, and that is a part of why Chinese see space as so important."

Indeed, a strong space industrial complex will generate benefits that ripple through the rest of China's economy. Furthermore, he said space achievements "promote pride within China, especially for the Chinese Communist Party (CCP) ... It's symbolic of how far China has come," he said, and "it gives the CCP legitimacy".

China is pushing into space services, including satellite launches, satellite applications and Earth observation/satellite imagery for others. Satellite customers include Belarus, Laos, Pakistan and Venezuela, for example, attracting hard currency and influence. Cheng said most underestimate the impact this has, as such countries grow almost totally dependent on Chinese equipment, assets and training over time. Incidentally, China could have manufactured back doors into these systems for foreigners to allow it access.

Mark Stokes, Executive Director at the US-based Project 2049 Institute think-tank, said in the same webinar that PLA requirements have always been fundamental to development of Chinese space capabilities. Potential PLA space missions in support of joint warfighting in a crisis include targeting (battlefield surveillance, electronic reconnaissance and ocean surveillance), communications, PNT services (obtaining target data, navigation information, navigation support and timing services), space jamming (encompassing space communications, radar, electro-optical and PNT) and space protection.

Stokes said the end of 2015 was "significant" for Chinese space efforts because consolidation of end-users under the PLA's Strategic Support Force (PLASSF) occurred, specifically within the Space Systems Department. In terms of developing and meeting requirements, the PLASSF is now "much more efficient," the American analyst posited.

Indeed, China created its space force in 2015, just a few months after Russia. After formally establishing its Space Force in December 2019, the US is still getting its equivalent off the ground. Cheng said both China and Russia have been pushing to militarise space, even though such a term is probably meaningless given that 95 per cent of space technology has dual applications for both military and civilian use. Certainly, outer space can no longer be viewed as a sanctuary.

Stokes said that "not much has changed really in terms of the space launch infrastructure and the launch, tracking and control of space ... but they are now integrated with end-users, and that is going to have an effect on making the whole system more efficient."

China has freedom of action in space, and the creation of the PLASSF and consolidation of space/counter-space research, development and acquisition, as well as training and operations, have benefitted from a single integrated command. The PLA's ability to interfere with American military operations in places like Taiwan will continue to grow yearly.

Cheng said, "The Chinese see future war as revolving around joint operations, which are not just land, air and sea forces." They also include the outer space and electronic warfare domains, which are necessary for information dominance." China, therefore, wishes to deny an adversary like the US the use of space, plus it needs to give the Chinese military every advantage.

China has therefore developed the ability to target hostile space-based assets (from the ground or space) and their all-important data-links. Indeed, jamming and electronic warfare complement anti-satellite weapons (which China has already tested), any of which can achieve effective mission kills against US and allied satellites. Stokes has not yet ascertained which agency is responsible for satellite kinetic kills, but it could well be the PLA Rocket Force, which is traditionally very tightly controlled by the Central Military Commission.

A detailed report entitled China's Space and Counter-space Capabilities and Activities, prepared for the US-China Economic and Security Review Commission, was published on March 30. Its authors, Mark Stokes, Gabriel Alvarado, Emily Weinstein and Ian Easton, summarised China's counter-space capabilities as follows.

"China has an operational counter-space capability that will evolve through 2020 and out to 2035. These capabilities include anti-satellite kinetic kill vehicles (KKV) and space electronic countermeasures ... On the non-kinetic side, the PLA has an operational ground-based satellite electronic countermeasures capability designed to disrupt adversary use of satellite communications, navigation, search and rescue, missile early warning and other satellites through use of jamming."

China obtained its first ground-based satellite jammers from Ukraine in the late 1990s, but it has developed its own solutions since then. "The PLA is capable of carrying out electronic countermeasures to disrupt, deny, deceive or degrade space services. Jamming prevents users from receiving intended signals and can be accomplished by attacking uplinks and downlinks.

The PLA and defence industry are developing and deploying jammers capable of targeting satellite communications over a large range of frequencies, including dedicated military communication bands. The PLASSF also has advanced cyber capabilities that could be applied in parallel with counter-space operations."

Nonetheless, the report asserted that the US still assumed a technological lead in space.

"China also is carrying out research, development and testing on potential space-based counter-space systems. The PLASSF and defense industry have carried out advanced satellite maneuvers and are likely testing orbital technologies that could be applied to counter-space operations." The PLASSF Network Systems Department probably oversees satellite jamming operations.

#### Private sector is key

Patel 21 [(Neel, space reporter for MIT Technology Review, and I also write The Airlock newsletter, your number one source for everything happening off this planet. Before joining, he worked as a freelance science and technology journalist, contributing stories to Popular Science, The Daily Beast, Slate, Wired, the Verge, and elsewhere. Prior to that, he was an associate editor for Inverse, where I grew and led the website’s space coverage.) “China’s surging private space industry is out to challenge the US” MIT Technology Review, 1/21/2021. https://www.technologyreview.com/2021/01/21/1016513/china-private-commercial-space-industry-dominance/] BC

At first glance, the Ceres-1 launch might seem unremarkable. Ceres-1, however, wasn’t built and launched by China’s national program. It was a commercial rocket—only the second from a Chinese company ever to go into space. And the launch happened less than three years after the company was founded. The achievement is a milestone for China’s fledgling—but rapidly growing—private space industry, an increasingly critical part of the country’s quest to dethrone the US as the world’s preeminent space power.

The rivalry between the US and China, whose space program has surged over the last two decades, is what most people mean when they refer to the 21st-century's space race. China is set to build a new space station later this year and will likely attempt to send its taikonauts to the moon before the decade ends. But these big-picture projects represent just one aspect of the country’s space ambitions. Increasingly, the focus is now on the commercial space industry as well. The nation's growing private space business is less focused on bringing prestige and glory to the nation and more concerned with reducing the cost of spaceflight, increasing its international influence—and making money.

“The state is really great at large, ambitious projects like going to the moon or developing a large reconnaissance satellite,” says Lincoln Hines, a Cornell University researcher who focuses on Chinese foreign policy. “But it’s not responsive to meeting market needs”—one big way to encourage rapid technological growth and innovation. “I think the government thinks its commercial space sector can be complementary to the state,” he says.

What are the market needs that Hines is referring to? Satellites, and rockets that can launch them into orbit. The space industry is undergoing a renaissance thanks to two big trends spurred by the commercial industry: we can make satellites for less money by making them smaller and using off-the-shelf hardware; and we can also make rockets for less money, by using less costly materials or reusing boosters after they’ve already flown (which SpaceX pioneered with its Falcon 9). These trends mean it is now cheaper to send stuff into space, and the services and data that satellites can offer have come down in price accordingly.

#### That factionalizes the CCP and emboldens challenges to Xi – the PLA is increasingly powerful and not unconditionally subservient

Simpson 16 [(Kurtis, Centre Director with Defence Research and Development Canada, has been conducting research on China’s leadership, Communist Party politics, the People’s Liberation Army and foreign policy for over 30 years,Master’s Degree and a Ph.D from York University, previously served as an intelligence analyst at the Privy Council Office and leader of the Asia Research Section at the Department of National Defence’s Chief Defence Intelligence (CDI) organization) “China’s Re-Emergence: Assessing Civilian-Military Relations In Contemporary Era – Analysis,” Eurasia Review, 12/21/2016] JL

Paralleling divided loyalties between Chinese Party, military and government bodies, one must also recognize that within each, factions exist, based upon generational, personal, professional, geographic, or institutional allegiances.19 These minor fault lines are most pronounced during crises, and they continue independent of professionalization.20 As was demonstrated by the civil-military dynamics of the Chinese government’s suppression of student demonstrators, both divisions and allegiances of interests emerged with respect to how to contain this situation and factional interests largely determined which troops would carry out the orders, who commanded them, what civilian Party leaders supported the actions, and who would be sanctioned following the mêlée. A consequence of factionalism within the PLA is that the Party’s control mechanisms (particularly because rule of law and constitutional restraints on the military are weak) needs to be robust to control not only a single military chain of command but (particularly during crises) perhaps more than one. This is not likely the case. A review of the evidence indicates the military’s influence, on the whole, is increasing, and the Party’s control decreasing.

On one level, the Party clearly controls the military as the Central Military Commission or CMC (the highest military oversight body in the PRC) is chaired by a civilian, President Xi Jinping. Moreover, the PLAs representation on formal political decision-making bodies (such as the Politburo Standing Committee, the Politburo, the Central Committee, and the NPC) has decreased over the years, but this does not necessary equate to a reduced level of influence. For example, the two Vice-Chairman of the CMC are now military generals, as are the remaining other eight members. Irrespective of institutional membership, military leaders retain considerable say. Personal interactions and informal meetings with senior party elites provide venues to sway decisions. They do, also, hold important places on leading small groups dedicated to issues like Taiwan and other security questions, such as the South China Seas.21

In a similar vein, other methods of Party influence, as exercised through political commissars, party committees, and discipline inspection commissions are no longer empowered to enforce the ideological dictates of a paramount leader. In the face of diffuse reporting chains, competing allegiances, and often effective socialization by the military units they are supposed to be watching over, most do not provide the Party guardian and guidance function once so pervasive.

While perhaps overstated, Paltiel’s observation that “…China’s energies over the past century and half have given the military a prominent and even dominant role in the state, preempting civilian control and inhibiting the exercise of constitutional authority” is likely now truer than ever before in history.22 While still loyal to the party as an institution, the PLA is not unconditionally subservient to a particular leader and retains the resources to enter the political arena if (at the highest levels) a decision is made to do so.

The civilian-military trend lines evident in China since the end of the Cultural Revolution affirm that the symbiotic nature of the Party-PLA relationship has morphed in important respects since the late 1960s. The promotion of professionalism, a reduced role for ideological indoctrination, an increasing bifurcation of civil-military elites, and growing state powers (complete with divided loyalties and continued factionalism) has complicated the political landscape informing how the CCP interacts with the PLA. If, as postulated, we have moved from a fused, ‘dual role elite’ model to one of ‘conditional compliance’ in which the military actually holds a preponderance of the power capabilities and where its interests are satisfied through concessions, bargaining, and pay-offs, empirical evidence should reflect this. A review of China’s three major leadership changes since the transition from the revolutionary ‘Old Guard’ to the modern technocrats confirms this.

Formally anointed and legitimized by Deng in 1989, Jiang assumed leadership without military credentials and few allies, viewed by many as a ‘caretaker’ Party Secretary in the wake of the Tiananmen Massacre. Despite his limitations, Jiang was well versed in the vicissitudes of palace politics. Informed by a high political acumen, he immediately promoted an image as an involved Commander-in-Chief, personally visiting all seven military regions, a sign of commitment not made by either the likes of Mao or Deng. Symbolic gestures like this were bolstered by his providing incentives to the PLA, such as: consistent raises in the defence budget; funds for military modernization; as well as equipment, logistics, and augmented R&D.23

Referred to as the ‘silk-wrapped needle,’ Jiang marshalled Party resources to not only reward, but to punish.24 His institutional authority over appointments enabled him to manipulate factions, dismiss those who opposed him, enforce new rigid retirement standards, and promote loyalists. A delicate equilibrium was established during the early-1990s until his semi-retirement in 2004,25 where Jiang guaranteed military priorities such as supporting ‘mechanization’ and an ‘information-based military’ (promoting the concept of RMA with Chinese characteristics) in exchange for the PLA backing of his legacy contributions to Marxist Leninist Mao Zedong thought with the enshrinement of his “Three Represents” doctrine.

Like Jiang, Hu Jintao’s succession was the product of negotiation, compromise, and concessions. While neither opposed by the PLA, nor supported by the military ‘brass,’ Hu was a known commodity, having served as Vice-President (1998) and CMC Vice-Chairman since 1999. He was deemed acceptable until proven otherwise. In the shadow of Jiang (who retained the position of CMC Chair until 2004), Hu did not exert the same kind of influence in, nor engender the same kind of deference from, China’s military, but equally proved capable of fostering a pragmatic relationship with the army which ensured its interests, and in so doing, legitimized his leadership position.

Ceding much of the military planning and operational decisions to the PLA directly, Hu played to his strengths and focused upon national security issues (such as the successful resolution of SARs in China), which bolstered his credibility as a populist leader among the masses, indirectly increasing his power within both the military and the Party. Additionally, he focused upon foreign military security affairs (most notably, North Korea-US negotiations), which enabled him to link his personal political agenda with the military’s latest ambitions.

In according the military a distinct place in China’s national development plan, supporting China’s rise, and ensuring its vital interests, Hu recognized the military’s evolving requirement to ‘go global’ and its worldwide interests in non-combat operations, such as peacekeeping and disaster relief, as well as stakes in the open seas, outer space, and cyberspace as interest frontiers with no geographic boundaries.26 Under the slogan of ‘China’s historical mission in the new phase of the new century’ and his acquiescence to the PLA’s stated requirements ‘to win local wars under modern conditions’ by funding new technology acquisition, Hu received the army’s formal recognition for his contributions to military thought based upon “scientific development” which informed a “strategic guiding theory,” resulting in a new operational orientation for China’s military. Emulating his predecessor, Hu won ‘conditional compliance’ from the PLA by successfully bartering military needs and wants for the army’s support and endorsement of his political tenure. This was not done outside of self-interest. Hu, as did Jiang, skillfully coopted, fired, and promoted select Generals to serve his greater ends, and he did this through varied means. Ultimately, however, it was done in a manner acceptable to the military.

Xi Jinping’s rise to power in 2012, while replicating the ‘horse-trading’ of Jiang and Hu, marks a fundamental departure in leadership style. Often described as a transformative leader, Xi is openly critical of his predecessors and rails against earlier periods where reform stalled and corruption grew.27 An advocate of ‘top-level design,’ incrementalism is being supplanted by a massive attempt to centralize all aspects of the CCP’s power, which includes a major restructuring of the economy, government, administration, and military.

Nicknamed “the gun and the knife” as a slight for his attempts to simultaneously control the army, police, spies, and the ‘graft busters,’ Xi’s power appears uncontested at present. Nevertheless, he is also viewed as ‘pushing the envelope too far’ and endangering the equilibrium which has been established between the Party and PLA over the past 25 years. For example, only two years into his mandate, he fostered a Cult of Personality, “the Spirit of Xi Jinping” which was officially elevated to the same standing as that of Mao and Deng, by comparison, foundational figures in Chinese history. His open attacks of political ‘enemies’ (most notably Zhou Yongkang, a Politburo Standing Committee member and former security czar) breeds fear among almost every senior official, all of whom are vulnerable on some point. Equally true, an unprecedented anti-corruption campaign is inciting comrades to turn on comrades, not unlike a massive game of prisoner’s dilemma.

Nowhere is the pressure for reform greater than in the PLA. Xi advocates administering the army with strictness and austerity, promoting frugality and obedience. At his direction, “mass-line educational campaigns” designed to “rectify work style” through criticism and self-criticism are being implemented.28 Ideological and political building is now equated with army building, as a means of ensuring the Party’s uncontested grip over the troops ideologically, politically, and organizationally. Select military regions (those opposite Taiwan and adjacent to the South China Seas) and commanders from those regions are witnessing favoritism and promotion at the expense of others. Moreover, a new “CMC Chairmanship Responsibility System” has been instituted, which directly calls into question the support of some of Xi’s senior-most generals.

A ‘hardliner’ by nature, Xi recognizes that he must earn the support of the PLA. New military priorities he supports include: accelerating modernization; Joint Command and C4ISR; training; talent management, as well as equipment and force modernization. That said, his goal of achieving the Chinese dream of building a “wealthy, powerful, democratic, civilized, and harmonious socialist modernized nation” by 2021, the 100th anniversary of the founding of the CCP, is exceptionally ambitious. It will require endless commitments to competing interests in a period of economic stagnation and global economic downturn. Should the PLA come to believe they are not first in line for government largess, support for Xi could erode very quickly.29

#### CCP instability collapses the international order – extinction

Perkinson 12 [(Jessica, MA in international affairs from American University) “The Potential for Instability in the PRC: How the Doomsday Theory Misses the Mark,” American University School of International Service, 2012] JL

Should the CCP undergo some sort of dramatic transformation – whether that be significant reform or complete collapse, as some radical China scholars predict2 – the implications for international and US national security are vast. Not only does China and the stability of the CCP play a significant role in the maintenance of peace in the East Asian region, but China is also relied upon by many members of the international community for foreign direct investment, economic stability and trade. China plays a key role in maintaining stability on the Korean Peninsula as one of North Korea’s only allies, and it is argued that instability within the Chinese government could also lead to instability in the already sensitive military and political situation across the Taiwan Strait. For the United States, the effect of instability within the CCP would be widespread and dramatic. As the United States’ largest holder of US treasury securities, instability or collapse of the CCP could threaten the stability of the already volatile economic situation in the US. In addition, China is the largest trading partner of a number of countries, including the US, and the US is reliant upon its market of inexpensive goods to feed demand within the US.

It is with this in mind that China scholars within the United States and around the world should be studying this phenomenon, because the potential for reform, instability or even collapse of the CCP is of critical importance to the stability of the international order as a whole. For the United States specifically, the potential - or lack thereof - forreform of the CCP should dictate its foreign policy toward China. If the body of knowledge on the stability of the Chinese government reveals that the Chinese market is not a stable one, it is in the best interests of the United States to look for investors and trade markets elsewhere to lessen its serious dependence on China for its economic stability, particularly in a time of such uncertain economic conditions within the US.

#### Independently, Xi will lash out to preserve cred in the SCS – US draw-in ensures extinction

Mastro 20 [(Oriana Skylar, Assistant Professor of Security Studies at Georgetown University's Edmund A. Walsh School of Foreign Service, Resident Scholar at the American Enterprise Institute) “Military Confrontation in the South China Sea,” Council on Foreign Relations, 5/21/2020] JL

The risk of a military confrontation in the South China Sea involving the United States and China could rise significantly in the next eighteen months, particularly if their relationship continues to deteriorate as a result of ongoing trade frictions and recriminations over the novel coronavirus pandemic. Since 2009, China has advanced its territorial claims in this region through a variety of tactics—such as reclaiming land, militarizing islands it controls, and using legal arguments and diplomatic influence—without triggering a serious confrontation with the United States or causing a regional backlash. Most recently, China announced the creation of two new municipal districts that govern the Paracel and Spratly Islands, an attempt to strengthen its claims in the South China Sea by projecting an image of administrative control. It would be wrong to assume that China is satisfied with the gains it has made or that it would refrain from using more aggressive tactics in the future. Plausible changes to China’s domestic situation or to the international environment could create incentives for China’s leadership to adopt a more provocative strategy in the South China Sea that would increase the risk of a military confrontation.

The United States has a strong interest in preventing China from asserting control over the South China Sea. Maintaining free and open access to this waterway is not only important for economic reasons, but also to uphold the global norm of freedom of navigation. The United States is also at risk of being drawn into a military conflict with China in this region as a result of U.S. defense treaty obligations to at least one of the claimants to the contested territory, the Philippines. China’s ability to control this waterway would be a significant step toward displacing the United States from the Indo-Pacific region, expanding its economic influence, and generally reordering the region in its favor. Preventing China from doing so is the central objective of the U.S. National Security Strategy and the reason the Indo-Pacific is the U.S. military’s main theater of operations. For these reasons, the United States should seek ways to prevent Chinese expansion, ideally while avoiding a dangerous confrontation and being prepared to deftly manage any crises should they arise.

China considers the majority of the South China Sea to be an inalienable part of its territory. Exercising full sovereignty over this area is a core component of President Xi Jinping’s “China Dream.” China does not accept or respect the sovereignty claims of Brunei, Indonesia, Malaysia, the Philippines, Taiwan, or Vietnam in this region. Although China has been cautious in pressing its claims thus far, three developments could convince Xi that China should be more assertive.

Xi could feel compelled to accelerate his timeline in the South China Sea to maintain his consolidated position within the Chinese Communist Party (CCP), particularly if the political situation in Hong Kong worsens, peaceful reunification with Taiwan becomes less likely, or domestic criticism of his management of the novel coronavirus outbreak increases. With China’s economic growth for 2020 projected to hit only 1.2 percent—the lowest since the mid-1970s—Xi could find it necessary to demonstrate strength while Beijing deals with internal fallout from the pandemic. China has already declared two new administrative districts in the South China Sea in April 2020 and has escalated its criticism of U.S. freedom of navigation operations (FONOPs) in the area. Moreover, with expectations that the first stage of China’s military modernization efforts will be completed in 2020, Xi could become more confident that China would succeed in pressing its claims militarily, especially if the United States is distracted internally with managing the coronavirus pandemic or its aftermath.

## 1NC – CP

#### CP: The appropriation of outer space through the production of space debris by private entities outside of the United States is unjust.

#### The United States should submit an environmental impact assessment of the appropriation of outer space through the production of space debris to the UN Office of Outer Space Affairs for public comment, modification, and approval. The United States federal government should implement the approved version of the submitted proposal.

**Counterplan competes and creates the least environmentally damaging version of the aff.**

William R. **Kramer**, PhD Polisci/Futures Studies @ U of H Manoa, Currently HDR Inc. Extraterrestrial Environmental Analyst, **’14**, “Extraterrestrial environmental impact assessments A foreseeable prerequisite for wise decisions regarding outer space exploration, research and development” Space Policy 30 (2014) 215-222

To be most effective, all spacefaring nations and enterprises would voluntarily participate in assessing their extraterrestrial environmental impacts prior to undertaking actions in space. A hypothetical chronology of such a process might include: (1) Impact assessments are prepared by the action proponent and submitted to an impartial international panel or board; (2) The panel determines the assessment's sufficiency; (3) The assessment is published in an electronic or other format accessible to the public followed by a comment period; (4) The action proponent addresses comments and submits responses to the panel; (5) The panel publishes its approval or concerns; (6) The action proceeds, is **modified or is abandoned**; and (7) should the action proceed, periodic reports of the action's progress and impacts are filed for future reference in a digital format to allow broad access. The process would support the spirit of both **NEPA** to “fulfill the responsibilities of each generation as trustee of the environment for succeeding generations” (42 USC x4331(b)(1)) and Article 4(1) of the Moon Agreement's directive that “due regard shall be paid to the interests of present and future generations.” Given the likelihood that all states would appreciate the need for maintaining extraterrestrial environments and landscapes for both future research and exploitation, pressure from peer states and space industries may be sufficient to **encourage a trend of compliance**.

Such a review and approval system (perhaps similar to NEPA's relationship with the Council on Environmental Quality and its oversight function) could be attempted within the structure of the UN, such as within the **UN Office of Outer Space Affairs**. The spirit of an extraterrestrial environmental assessment program would be likely to fit within the mandate of the organization. However, amending the Outer Space Treaty or otherwise developing an administrative UN capacity to achieve the goals proposed in this paper would require a level of international commitment and cooperation that may be both lengthy and difficult to achieve. Spacefaring nations and international organizations are already invited to submit annual reports on their space activities and research to the UN Committee on the Peaceful Uses of Space, **so a precedent for reporting exists.** **Presently, however, reports tend to document positive actions and research, not details of extraterrestrial environmental impacts**.

**Extinction. EIA is key to preserve space resources, stop resource wars, and extra-terrestrial environmental damage.**

William R. **Kramer**, Hawaii Research Center for Futures Studies @ University of Hawaii, **'17**, In dreams begin responsibilities – environmental impact assessment and outer space development, ENVIRONMENTAL PRACTICE, VOL. 19, NO. 3, 128–138

**Benefits of extraterrestrial environmental impact assessment** Most publications regarding outer space resources maintain that those resources are nearly limitless, and many business models for exploitation do not imagine that resources on Mars, for example, will ever be exhausted (Lewis, 1996; Zubrin, 1996; Renstrom, 2016). Ever is a long time. While the statement may be figuratively true for some mineral ores that may last through an individual company’s project timeline, it is not necessarily true for long-term planning. **There will likely be competition for the rarest (most valuable) minerals**. Without some form of planning and regulation, they may be extracted in an inefficient and environmentally damaging manner and be **quickly depleted** (as exemplified by hydraulic mining for gold on Earth, which wasted much of the resource and resulted in extensive environmental damage) (Merchant, 1998).

How might resources be put to their highest and best use unless regulated? Both the Moon and Mars have water ice which will be **crucial for human survival**, but water also has lucrative industrial uses; it is potentially the raw material for manufacturing both rocket fuel and oxygen. **Conflicts over resource allocation** may be better addressed during an **assessment process** that seeks to balance highest and best use with discovery and first use. Who gains access to specific areas for mining becomes more problematic in that the Outer Space Treaty does not allow “ownership” of extraterrestrial territory; there is no guarantee that companies such as those listed previously will gain access to the most productive sites. The China National Space Administration is planning to place a crew on the Moon by 2024, so **competition for the best sites will be intense** (Kramer, 2015b; China Digital Times, 2012).

Space industries generally are not considering that their proposed actions may preclude alternative uses such as scientific research and human settlement. There will be a stream of not yet imagined uses that could be adversely affected or foreclosed. Many of the same conflicts between land use and human habitation experienced on Earth may emerge on extraterrestrial sites. On the Moon, for example, there are preferable sites for collecting solar energy. These “peaks of eternal light” are areas nearly always or constantly exposed to sunlight at the poles. They are very limited in both distribution and size (Elvis, Milligan, and Krolikowski, 2016). If a mining operation were to determine such areas suitable for their operations, or if mining created a constant plume of dust that would diminish the effectiveness of solar panels, how might such a situation be resolved?

Should potentially dangerous industries such as fuel manufacturing or storage be located near living areas? Would hydraulic fluid pipelines be closely monitored for leaks that may affect subsurface ice deposits mined for drinking water? How might vibrations from detonations affect unrelated structures or scientific instrumentation, such as telescopes? And how might a search for life, whether extinct or still living, be affected by human presence and our trail of bacteria and organic wastes? Humans’ biological pollution of Mars, for example, may greatly affect the results of any search for extraterrestrial life there (Kramer, 2009; McKay, 2009). Peter Doran of the Planetary Protection Subcommittee of the NASA Advisory Council offered, “The big issue with all missions to Mars is we don’t want to create a situation where we are impacting future life-detection science. Picture humans … walking around shedding microbes everywhere we go. Space suits as we know them do not take care of this problem (Mack, 2016).”

Condo’s good

1. Neg flex – condo is key to allowing the neg to test the aff from multiple perspectives – that outweighs aff strategy – the aff gets infinite prep, but the neg is purely reactionary
2. Info processing – condo teaches us to think quickly and deal with overwhelming amounts of info – most real world. Simulating information overload best prepares students to cope—most valuable skill.

## 1NC – DA

#### Democracy’s on the brink – control of information will determine its fate

Nye 18 [(Joseph, Distinguished Visiting Fellow at the Hoover Institution, University Distinguished Service Professor Emeritus and former dean of Harvard’s Kennedy School of Government, PhD in political science from Harvard) “Protecting Democracy in an Era of Cyber Information War,” Hoover Institution, 11/13/2018] JL

Today, in the face of successful Chinese control of what citizens can see and say on the Internet and Russian use of the Internet to interfere in the 2016 American election, the United States (and allied democracies) find themselves on the defensive. The expected asymmetries seem to have been reversed. Autocracies are able to protect themselves by controlling information flows, while the openness of democracies creates vulnerabilities that autocracies can exploit via information warfare. Ironically, one cause of the vulnerabilities has been the rise of social media and mobile devices in which American companies have been the global leaders. Citizens voluntarily carry Big Brother and his relatives in their pockets. Along with big data and artificial intelligence, technology has made the problem of defending democracy from information warfare far more complicated than foreseen two decades ago. And while rule of law, trust, truth, and openness make democracies asymmetrically vulnerable, they are also critical values to defend. Any policy to defend against cyber information war must start with the Hippocratic oath: first, do no harm.

The use of information as an instrument of conflict and manipulation in international politics has a long history. Britain manipulated information to move American opinion in the direction of war with Germany both in 1917 and 1941. The United States and the Soviet Union both used broadcasts, covert organizations, and funds to interfere in foreign elections during the Cold War.3 And more narrowly, in battlefield situations in Iraq or in the campaign against ISIS, information was an important tool. In recent years, Russia’s hybrid war against Ukraine has encompassed both cyber attacks and manipulation of information. Information operations are a critical component of modern warfare.4

Russia has used propaganda to express preferences for candidates in American elections since at least 1964, but new technologies have amplified their impact enormously.5 According to former CIA Director Michael Hayden, Russian interference in the 2016 election was “the most successful covert influence campaign in recorded history.”6 For example, Russian operatives used Facebook to publicize 129 staged events, drawing attention of 340,000 users; 10 million people saw ads paid for by Russian accounts; and 126 million Americans saw posts by 470 accounts affiliated with the Russian Internet Research Agency.7 A study by Twitter reported that 50,000 Russia-linked accounts were automated and tweeted election related content.8 Reports released by the Senate Intelligence Committee estimate that the Russian campaign reached not only the 126 million people on Facebook but another 20 million more on Instagram.9 Some Russian messages were crafted to support particular candidates while others were designed to create a general sense of chaos. Still others were micro-targeted to suppress voting by particular demographic groups such as African-Americans or younger voters. While skeptics argue that Russian efforts were a small percentage of the total content on the Internet, “for sub-groups of targeted Americans, the messaging was perhaps ubiquitous.”10

Before the Internet, such operations involved costly training and movement of spies across borders, establishment of foreign bank accounts, and transfers of cash. Now similar effects can be accomplished remotely at much lower cost. It is much easier to send electrons across borders than human agents. Ransoming a failed spy can be costly, but if no one clicks on a phishing e mail, it is simple, deniable, and virtually free to send another. In 1983, when the KGB seeded the rumor that AIDS was the product of U.S. government experiments with biological weapons, the rumor started with an anonymous letter to a small New Delhi newspaper and then was propagated globally but slowly over several years by widespread reproduction and constant repetition in conventional media. It took four years to reach full fruition. 11 In 2016, an updated version of the same technique was used to create “Pizzagate,” the bizarre rumor that Hillary Clinton’s campaign manager ran a child sex ring in a Washington restaurant. It spread instantly on the Internet. What’s new is not the basic model; it’s the speed with which such disinformation can spread and the low cost of spreading it.

With its armies of paid trolls and botnets, along with outlets such as Russia Today (RT) and Sputnik, Russian intelligence, after hacking into the e-mails of the Democratic National Committee and senior Clinton campaign officials, could distract and disrupt news cycles week after week without setting foot in the United States. And it could also count on the witting and unwitting help of organizations like Wikileaks. Russian messages aimed at priming, framing, agenda setting, and contagion were accelerated by U.S. media that were too quick and unreflective in using the Russian phrasing and frames.12 American voters are subject to many influences, and there were many potential causes of the narrow outcome of the 2016 election. It is far too simple just to blame manipulation of social media. As social scientists say, the outcome was “overdetermined.” But whatever its effects on the particular election outcome, Russia was able to accomplish its deeper goal of sowing disruption and discrediting the democratic model. It successfully undercut American soft power.

#### Constellations are key to democracy promotion – they put authoritarian leaders on the defensive – it’s perceptual and proven by opposition to satellites

Schwille 4/12 [(Michael, senior policy analyst at RAND, research interest focuses on the integration of information into combined arms warfare, M.A. in international development studies from George Washington University) “Satellite Internet Services—Fostering the Dictator's Dilemma?” RAND Corporation, 4/12/2021] JL

Constellations of low-altitude, low-latency satellites providing broadband internet access to wide swathes of the earth are an impending challenge to the information dominance enjoyed by the world's authoritarian states. Whether Amazon's proposed Project Kuiper, Elon Musk's Starlink (already functional in some areas of North America), or the United Kingdom funded OneWeb, the ability to provide relatively low cost internet access outside of government control is both a challenge for authoritarian states and an opportunity for democracies.

In Russia, the Duma is already considering a law to criminalize access to such satellite services. China is not only planning to launch a competing service, it has Starlink's Musk concerned about having his satellites “blown up.” North Korea, which bans its citizens from accessing the internet and (in)famously attacks leaflets with machine guns, shells loudspeakers with artillery, and punishes citizens for accessing Chinese cellphone towers, has yet to comment publicly on such services. Given this history though, Pyongyang's reaction is unlikely to be very positive.

What are low-altitude, low-latency satellites and why are authoritarian states so concerned? The problem (for authoritarians) and promise (for democracies) are the services' ability to provide broadband internet access almost anywhere on earth, with nothing new required on the ground aside from a small terminal. Because these satellites orbit at several hundred kilometers (low Earth orbit), versus 35,000km for telecommunication satellites in geostationary orbit, their terminals can be smaller, portable, and easier to conceal, smuggle, and infiltrate. With one of these terminals, users can cheaply and quickly bypass national controls on the internet and information access, plus place phone (e.g. Voice over Internet Protocol, Skype, or Zoom) calls outside of government-controlled systems. It is this freedom of information access and communication that has Russia and China so concerned, and that provides an opportunity for democratic states to rebalance their current information disadvantage.

In what some scholars have termed democracy's dilemma, nations that rely on relatively free and open information flows are vulnerable to having that openness turned against them by adversaries. Think Russian influence on Brexit, the 2016 U.S. elections and the COVID-19 infodemic. What these new satellite systems offer is an opportunity to reinvigorate the dictator's dilemma (PDF)—the fear authoritarian leaders have of nonregime narratives reaching their people, or their people communicating outside of government-approved channels.

Just how powerful is this fear? Moscow reacts more negatively to criticisms and threats to its information control than it does to (far more expensive) NATO exercises. For years, Russian state media have even coordinated to deflect these criticisms of Russia's censorship onto countries with which Moscow is in conflict, successively targeting Georgia, the United States, and Ukraine.

China's rulers have a similar view, more fearful of “American ideals of freedom, democracy, and human rights infecting the people of China and Hong Kong,” than they are of U.S. military or economic challenges. This is not a new concern for Beijing; the term *Great Firewall of China* was discussed in a Wired article back in 1997. Beijing's controls have expanded since, with hundreds of thousands of censors and billions of dollars spent on informational and societal control, including the uniquely intrusive social credit systems (PDF).

North Korea is an even clearer example, with years of North Korea specialists (see Lankov, Baek, Cha, Myers, and others) highlighting Pyongyang's reliance on domestic information control to keep the Kim family in power. Impressive control, but a weakness masquerading as a strength.

This desire for information control represents both the dictator's dilemma and democracy's opportunity. Beijing, Moscow, and Pyongyang (as well as Tehran and others) are clearly concerned about the threat posed by unsupervised information access. Washington (or Brussels, London, Tokyo…whomever) publicly advocating for more open internet access, coupled with a clear mention of the new satellite services, would quickly command attention and establish a compelling narrative (and underlying threat). Coupling this message with a reminder of the West's ability to challenge information controls by, for example, smuggling bulky typewriters, printing presses, and Xerox machines into Eastern Europe in the 80s, which increased the flow of uncensored information, would add credibility to the threat—if authoritarian states thought typewriters were a problem, infiltrating an “internet in a box” (or thousands of them) looms as an even more compelling danger. The physical threat of infiltrated devices combined with a narrative advocating freedom of information access provide the West with a new, information-based tool for foreign policy leverage. A tool, or active measure, based not on fear, deception, or disinformation, but simply on information access.

By offering an information-based response to an information-based attack, this tool offers a fresh, calibrated response option. Chinese cyber espionage or recent attacks on Hong Kong's civil liberties, Russian attempts to influence Brexit or U.S. elections (or the more recent SolarWinds hack), North Korean attacks on Sony or South Korea's ATM network, are all activities ripe for response. Once this tool is effectively demonstrated in terms of fostering the dictator's dilemma, democracy's response and deterrence toolkits, for both cyber and influence activities, commensurately expands.

Importantly, the utility of this information tool is not confined simply to allowing outside information in; it also allows information to flow out (especially important with North Korea). Perhaps most importantly, it provides another tool to avoid government monitoring inside an authoritarian state. When paired with mesh networks of the type used, for example, during demonstrations in Hong Kong, it further increases the opportunity for the free flow of information dictators perceive as so threatening.

This tool (or its threatened use) does not replace other foreign policy tools—diplomatic, economic, and military tools remain options; this proposal simply adds a new information-based capability. The tool fits within a historical context of Western information activities and offers a compelling public narrative—fighting censorship. The hardware costs are relatively low, largely borne by the companies launching the satellites, and coming into existence whether governments wish them to or not. Finally, by rebalancing democracy's dilemma through a reinforcement of the dictator's dilemma, this tool offers an information response to information/cyber/influence attacks, using a method that clearly targets the vulnerabilities and sensitivities of authoritarian adversaries.

#### Democracy solves war

Christopher Kutz 16. PhD UC Berkeley, JD Yale, Professor, Boalt Hall School of Law @ UC Berkeley, Visiting Professor at Columbia and Stanford law schools, as well as at Sciences Po University. “Introduction: War, Politics, Democracy,” in On War and Democracy, 1.

Despite Churchill’s famous quip—“Democracy is the worst form of government, except for all those other forms that have been tried from time to time”2—democracy is seen as a source of both domestic and international flourishing. Democracy, understood roughly for now as a political system with wide suffrage in which power is allocated to officials by popular election, can solve or help solve a host of problems with stunning success. It can solve the problem of revolutionary violence that condemns autocratic regimes, because mass politics can work at the ballot box rather than the streets. It can help solve the problem of famine, because the systems of free public communication and discussion that are essential to democratic politics are the backbone of the markets that have made democratic societies far richer than their competitors. It can help solve the problem of environmental despoliation, which occurs when those operating polluting factories (whether private citizens or the state) do not need to answer for harms visited upon a broad public. And democracy has been famously thought to help solve the problem of war, in the guise of the idea of the “peace amongst democratic nations”—an idea emerging with Immanuel Kant in the Age of Enlightenment and given new energy with the wave of democratization at the end of the twentieth century.

## 1NC – Case

### 1NC – Debris

#### Debris creates deterrence by raising the bar for conflict – international norms fail

Miller 7/31 [(Gregory, Chair of the Department of Space Power at the Air Command and Staff College, Ph.D. in Political Science from The Ohio State University) “Deterrence by Debris: The Downside to Cleaning up Space,” Space Policy, 7/31/2021] JL

The danger of kinetic strikes increasing orbital debris is a common theme in the literature, but the positive deterrent effects of some debris are often overlooked. The debris resulting from destroyed satellites, or other space objects, creates a deterrent effect on actors who might otherwise violate international norms and strike at objects in space, either to test their capabilities or as an act of hostilities. This is not deterrence in the traditional sense, of one actor publicly threatening punishment in response to another actor’s unwanted actions. It is not deterrence by denial since the attacker is not damaged and may even achieve its objective. Nor is it deterrence by punishment because the debris itself does not threaten to punish the attacker’s country. But debris can increase the future costs to the aggressor, even if their initial attack succeeds, and thus it has a similar restraining effect on certain behavior. Like the automated response of the U.S. tripwire in West Germany, the threat that debris can pose to state interests acts as a form of deterrence, at least to prevent some actors from taking certain types of actions. Removing the danger of debris will weaken that restraint and thus weaken deterrence, making ASAT tests and hostile actions in space more likely.

Several factors may deter a state from launching kinetic tests or striking against an adversary’s interests in space. For one thing, if a state’s adversary has similar capabilities to destroy objects in space, deterrence would be a function of not wanting to escalate tensions. Although international law only explicitly prohibits states from placing weapons of mass destruction in orbit, international space law, like the Outer Space Treaty [30], does provide a framework for addressing the activities of one state that lead to the damage of another state’s property. Likewise, there are international norms (informal but expected rules of behavior) against the weaponization of space. But these norms seem to be in decline [31], and such norms only deter a state from engaging in certain types of behavior if the state cares about following norms, if it cares about how states perceive its behavior, or if it believes other states are willing to enforce the norms. The beauty of debris as a deterrent is that it does not rely on the enforcement of norms or the credibility of states to succeed.

#### Space debris creates existential deterrence and a taboo

Bowen 18 [(Bleddyn, lecturer in International Relations at the University of Leicester) “The Art of Space Deterrence,” European Leadership Network, February 20, 2018, https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/] TDI

Fourth, the ubiquity of space infrastructure and the fragility of the space environment may create a degree of existential deterrence. As space is so useful to modern economies and military forces, a large-scale disruption of space infrastructure may be so intuitively escalatory to decision-makers that there may be a natural caution against a wholesale assault on a state’s entire space capabilities because the consequences of doing so approach the mentalities of total war, or nuclear responses if a society begins tearing itself apart because of the collapse of optimised energy grids and just-in-time supply chains. In addition, the problem of space debris and the political-legal hurdles to conducting debris clean-up operations mean that even a handful of explosive events in space can render a region of Earth orbit unusable for everyone. This could caution a country like China from excessive kinetic intercept missions because its own military and economy is increasingly reliant on outer space, but perhaps not a country like North Korea which does not rely on space. The usefulness, sensitivity, and fragility of space may have some existential deterrent effect. China’s catastrophic anti-satellite weapons test in 2007 is a valuable lesson for all on the potentially devastating effect of kinetic warfare in orbit.

1. **Probability – 0.1% chance of a collision.**

**Salter 16** [(Alexander William, Economics Professor at Texas Tech) “SPACE DEBRIS: A LAW AND ECONOMICS ANALYSIS OF THE ORBITAL COMMONS” 19 STAN. TECH. L. REV. 221 \*numbers replaced with English words] TDI

The probability of a collision is currently low. Bradley and Wein estimate that the maximum probability in LEO of a collision over the lifetime of a spacecraft remains below one in one thousand, conditional on continued compliance with NASA’s deorbiting guidelines.3 However, the possibility of a future “snowballing” effect, whereby debris collides with other objects, further congesting orbit space, remains a significant concern.4 Levin and Carroll estimate the average immediate destruction of wealth created by a collision to be approximately $30 million, with an additional $200 million in damages to all currently existing space assets from the debris created by the initial collision.5 The expected value of destroyed wealth because of collisions, currently small because of the low probability of a collision, can quickly become significant if future collisions result in runaway debris growth.

1. **Time frame – Kessler effect 200 years away**

**Stubbe 17** [(Peter, PhD in law @ Johann Wolfgang Goethe University Frankfurt) “State Accountability for Space Debris: A Legal Study of Responsibility for Polluting the Space Environment and Liability for Damage Caused by Space Debris,” Koninklijke Brill Publishing, ISBN 978-90-04-31407-8, p. 27-31] TDI

The prediction of possible scenarios of the future evolution of the debris p o p ulation involves many uncertainties. Long-term forecasting means the prediction of the evolution of the future debris environment in time periods of decades or even centuries. Predictions are based on models84 that work with certain assumptions, and altering these parameters significantly influences the outcomes of the predictions. Assumptions on the future space traffic and on the initial object environment are particularly critical to the results of modeling efforts.85 A well-known pattern for the evolution of the debris population is the so-called Kessler effect’, which assumes that there is a certain collision probability among space objects because many satellites operate in similar orbital regions. These collisions create fragments, and thus additional objects in the respective orbits, which in turn enhances the risk of further collisions. Consequently, the num ber of objects and collisions increases exponentially and eventually results in the formation of a self-sustaining debris belt aroundthe Earth. While it has long been assumed that such a process of collisional cascading is likely to occur only in a very long-term perspective (meaning a time 1 n of several hundred years),87 a consensus has evolved in recent years that an uncontrolled growth of the debris population in certain altitudes could become reality much sooner.88 In fact, a recent cooperative study undertaken by various space agencies in the scope of i a d c shows that the current l e o debris population is unstable, even if current mitigation measures are applied. The study concludes:

Even with a 90% implementation of the commonly-adopted mitigation measures [...] the l e o debris population is expected to increase by an average of 30% in the next 200 years. The population growth is primarily driven by catastrophic collisions between 700 and 1000 km altitudes and such collisions are likely to occur every 5 to 9 years.89

#### State-sponsored programs make space militarization inevitable

Nagashiwa 20 [(Jun, Adjunct Professor at the National Defense Academy’s Graduate School of Security Studies in Japan, former Lieutenant General, MA in European Security from Tsukuba University) “The Militarization of Space and its Transformation into a Warfighting Domain,” Sasakawa Peace Foundation, 7/17/2020] JL

In 2018, the United States issued its first National Space Strategy, which recognized that its adversaries had turned space into a warfighting domain[1].Military use of space began with the Sputnik crisis in October 1957[2], which initiated the space race between the U.S. and the Soviet Union. More recently, a growing number of countries are pursuing military uses of space. India conducted an anti-satellite weapons test in March 2019 and Iran launched its first military satellite launch in April. In its reorganization in 2015, the Chinese PLA established the Strategic Support Force, which handles the fields of space, cyber, and the electromagnetic spectrum. Russia also set up an independent Space Force in the same year. In response to these developments, France established the Space Command in September 2019, and the U.S. organized the Space Force last December.

In January 2007, China carried out an anti-satellite destruction test using anti-satellite weapons (ASAT), triggering the development of space as a warfighting domain in the post-Cold War era. China needed to build asymmetric capabilities in space and cyberspace[3]as a response to an expected contingency in the Taiwan Strait. This test created a large amount of space debris and was met with intense international criticism[4]. Although space was used militarily for decades during the Cold War, both the U.S. and the Soviet Union refrained from these kinds of tests because careless physical attacks could have a significant impact on all operations in space[5]. However, China, which is pursuing a strategy of asymmetric warfare, has set foot into this “sanctuary,” and forced the United States to recognize the vulnerability of its space system[6].

Space has enormous potential for not only the development of science and technology, but also for economic growth. Globalized society is increasingly dependent on the space system, and Japan is participating in the U.S.-led Artemis Program, which aims to explore lunar space. China, which aspires to global economic leadership, is also moving to make use of cislunar space[7], and is expected to work with Russia[8]. Non-military competition in acquiring growth resources in space has already begun through the development and use of relevant technologies. Next-generation information and communications technology (ICT), quantum computing and other such technologies will reduce the vulnerability of space systems.

As space becomes a more important resource, increasing the resilience of space systems has become an urgent issue. There were about 20,000 pieces of space debris as of November 2019[9], and more players are set to enter the field with new business models that use a constellation of small, cheaper satellites. As a result, “congestion” in space is expected to become more serious. Furthermore, in addition to kinetic threats like ASAT and physical deterioration, non-kinetic threats like cyberattacks and laser obstruction are becoming more dangerous. The vulnerability of space systems will inevitably increase.

In the June 2020 U.S. Defense Space Strategy, China and Russia are labelled as the biggest operational threats to the U.S. in outer space, and are designated as parties who have weaponized space and turned it into an area of great power competition. Both China and Russia, which prioritize their own usage of space, are criticized for trying to prevent other countries from freely utilizing space[10].

Space is becoming a less stable environment, even as it holds the promise of becoming a new source of human prosperity.

There are growing signs that space is being utilized for security as the concept of the battlefield has changed with advances in technology[11].Technologies to address air and missile threats are a clear example of this. The accuracy and reliability of ballistic missile defense (BMD) systems has improved in recent years, but developments in offensive technologies have outpaced this progress. China and Russia are developing flying object threats that overwhelm defensive reaction capability in Western countries. Hypersonic glide vehicles (HGV), for example, travel at Mach 5 or higher, and missile threats with orbital change capabilities are difficult to intercept.

#### No miscalc – debris hits stations all the time.

Cain ’15 (Fraser; 12/23/15; writer for Universe Today; “How Do Astronauts Avoid Debris”; http://www.universetoday.com/121067/how-do-astronauts-avoid-debris)

So, just how do we keep our space stations, ships and astronauts from being riddled with holes from all of the space junk in orbit around Earth? We revel in the terror grab bag of all the magical ways to get snuffed in space. Almost as much as we celebrate the giant brass backbones of the people who travel there. We’ve already talked about all the scary ways that astronauts can die in space. My personal recurring “Hail Mary full of grace, please don’t let me die in space” nightmare is orbital debris. We’re talking about a vast collection of spent rockets, dead satellites, flotsam, jetsam, lagan and derelict. It’s not a short list. NASA figures there are **21,000 bits of junk** bigger than 10 cm, **500,000 particles** between 1 and 10 cm, and more than **100 million** smaller than 1 cm. Sound familiar, humans? This is our high tech, sci fi great Pacific garbage patch. Sure, a tiny rivet or piece of scrap foil doesn’t sound very dangerous, but consider the fact that astronauts are orbiting the Earth at a velocity of about 28,000 km/h. And the Tang packets, uneaten dehydrated ice cream, and astronaut poops are also traveling at 28,000 km/h. Then think about what happens when they collide. Yikes… or yuck. Here’s the International Space Station’s solar array. See that tiny hole? Embiggen and clarinosticate! That’s a tiny puncture hole made in the array by a piece of orbital crap. The whole station is **pummeled by tiny pieces of space program junk drawer contents**. Back when the Space Shuttle was flying, NASA had to **constantly replace their windows because of the damage they were experiencing** from the orbital equivalent of Dennis the Menace hurling paint chips, fingernail clippings, and frozen scabs.

#### Use or lose is wrong – It’d be irrational AND never be contemplated by any state.

Kroenig 18 Matthew Kroenig, Associate Professor in the Department of Government and the Edmund A. Walsh School of Foreign Service at Georgetown, The Logic of American Nuclear Strategy: Why Strategic Superiority Matters, Oxford UPress, pp. 137-142

The second, and more common, argument as to why nuclear superiority might be destabilizing is because the state in the position of nuclear inferiority (in this case, America’s adversaries) may feel “use ’em or lose ’em” (UELE) pressures, but this argument also withers under interrogation.26

According to strategic stability theorists, a US nuclear advantage increases the danger of nuclear war because the inferior opponent may fear that its nuclear arsenal is vulnerable to a first strike. Rather, than wait for the adversary (in this case the United States) to move first and wipe out, or seriously blunt, its strategic forces, the argument goes, the inferior state may decide to intentionally launch a nuclear war early in a crisis in order to avoid suffering a disarming first strike. This is the logic most often invoked by strategic stability theorists when they claim that US nuclear advantages are destabilizing. This is also the precise problem identified and inspired by Wohlstetter’s basing studies.

Use ’em or lose ’em enjoys a certain superficial plausibility, but, upon closer inspection, there are two fundamental reasons why the logic simply does not hold up. First, it ignores the fact that the superior state retains a healthy ability to retaliate. So, even if the inferior state is worried about having its nuclear weapons eliminated in a first strike, the decision to launch its nuclear weapons first as a coping mechanism would be a decision to intentionally launch a nuclear war against a state with at least a secure, second-strike capability. This means that even if the inferior state launches its nuclear weapons first, it will be virtually guaranteed to suffer devastating nuclear retaliation. Moreover, given that it is in a situation of extreme inferiority (so extreme that it might even be vulnerable to a preemptive nuclear strike), this would mean intentionally launching a devastating nuclear war that will likely turn out much worse for itself then for its opponent. It would simply be irrational for a state to intentionally launch a nuclear war against a state with an assured retaliatory capability.

### 1NC – Space Col

#### Space colonization causes intergroup bias – that leads to armed conflict between space-faring nations

Kovic 18[(Marko Kovic, Marko Kovic is the co-founder president of the nonprofit think tank ZIPAR (Zurich Institute of Public Affairs Research) and the co-founder and CEO of the consulting firm ars cognitionis, and a researcher in Rationality, Decision-Making, Democracy, Technology-Related Risks, Future of Humankind) “Political, Moral, and Security Challenges of Space Colonization” SocArXiv Papers, June 11, 2018] TDI

In the above discussions of political and moral challenges, it is presumed that the problems and challenges that arise do so in a generally peaceful system of colonization. However, peace in the sense of a lack of armed con‑ict is not guaranteed with space colonization. On the contrary: Space colonization might produce new kinds of security challenges Violence and war have been decreasing over the course of our civilization’s history [45, 46, 47]. The decrease in violent armed con‑ict has coincided with an increase in cultural, political, and economic interconnectedness. Even though major armed conflicts are not yet a thing of the past [48], humankind will probably continue on its current trajectory of peace. With space colonization, however, the trend of growing closer together might reverse because of increasing fragmentation, and with that reversal, peaceful cooperation might again give way to armed conflict. Some amount of human fragmentation due to space colonization is almost inevitable. One of the strongest biases we humans have is the intergroup bias [49]: We tend to separate people into ingroups and outgroups, and we generally favor our own ingroup over any outgroup. Our ingroup favoritism is often the source of collective identity: We identify with our home city and think it is better than other cities; we identify with our favorite football team and think it is better than other teams; we identify with our country of origin and think it is better than other countries. In a future in which humans have successfully mastered type I colonization (colonization within our Solar System) and perhaps even type II colonization (Intersolar colonization), belonging to one habitat rather than another will almost certainly also be a source of collective identity. Humans born and raised on Venus would probably have more positive general attitudes towards Venus than towards Earth. That is not a problem in and of itself, but it can become a problem: If humankind is very successful at space colonization and manages to establish colonies across the galaxy, the ingroup dynamics within colonies and regions of colonies might grow so much that the perceived benefits of armed conflict increase, and the perceived costs decrease. In part, this might be due to the infrahumanization (or dehumanization) bias [50]: Our intergroup bias can have the effect of perceiving members of the outgroup as less human than members of our own ingroup. The problem of intergroup bias and armed conflict could be compounded by real biological differences in the long-term future. In the long term, different colonies of humans might adopt different stances on human enhancement technology and embrace different kinds of enhancement technologies. These differential paths of human enhancement might result in technology-induced quasi-speciation, whereby different strands of humans have increasingly distinct biological traits. The ultimate result of such a development might be a strong frag-mentation of humankind and an increasing arms race in order to defend against the outgroup of all the (former) humans that are different from the ingroup (former) humans [51]

#### Existential threats don’t leave after colonization of space.

Stoner 17 [(Ian, teaches philosophy at Saint Paul College in Minnesota. My teaching focuses on the acquisition of philosophical skills, especially critical reading skills. I'm most interested in virtue theory, methods in practical ethics, and questions at the intersection of philosophy of disability and theories of well-being.) “Humans Should Not Colonize Mars” 2017] TDI

We have an obligation to ensure the long-term survival of our species. We ought, then, to expand beyond Earth, because once humans are established elsewhere in the heavens, our species will no longer be vulnerable to catastrophes on Earth. Since Mars is by far the best prospect for an autonomous human colony in the foreseeable future, we should settle it. As Larry Niven once said, according to Arthur Clarke, “the dinosaurs became extinct because they didn't have a space program. And if we become extinct because we don't have a space program, it'll serve us right.”5 Many people celebrated for their smarts endorse this argument for colonizing Mars. This is Elon Musk’s reason for pushing for Mars (Urban 2015). Carl Sagan (1994, 377), Ray Bradbury (Bradbury et al 1973, 133), Stephen Hawking (Highfield 2006), and Paul Davies (2004) have all endorsed some version of the species-survival argument for space colonies. Everyone on this list agrees that establishing an autonomous colony on Mars is a rational response to the moral imperative to hedge against the risk of an extinction-level catastrophe on Earth. Reply: The range of species-level threats addressed by a Mars colony is relatively narrow (York 2002). A Mars colony would not insure against large-scale threats to the solar system, such as nearby supernovae, invading extraterrestrials, or an early expansion of the sun. Nor would it insure against threats we pose to ourselves, such as war and environmental destruction. **We carry these threats to ourselves everywhere we go, and we would carry them with us to Mars**. A Mars colony would only insure against externally imposed large-scale environmental threats specific to Earth. A colony on Mars would be unmolested by, for example, a Chicxulub-scale asteroid or comet strike on Earth. But is a Mars colony the best way to hedge against this risk? First, note that while it’s relatively easy to imagine an asteroid or comet impact knocking civilization back a few hundred years, it’s genuinely difficult to imagine a sapiens-extincting impact. Contra-Niven, Chicxulub didn’t kill the dinosaurs because they lacked a space program; it killed them because they lacked blankets. Now, imagine that you have no vested interest in colonizing Mars, and your concern is to do a flinty eyed cost/benefit analysis of various proposals to hedge against asteroid-based threats to civilization and species survival. You’re presented with the following options. The first is the Musk option: invest the resources required to establish a million-person settlement on Mars that might possibly be self-sustaining in the event of a civilization-ending asteroid strike on Earth. 5 https://www.clarkefoundation.org/about-sir-arthur/sir-arthurs-quotations/ 7 Option two: invest in detection and re-direct capabilities for near-Earth objects. Invest in seed arks and hardened knowledge repositories and energy sources. With proper investment we could come close to eliminating the chance of a civilization-ending, let alone a species-ending impact. This course would be cheaper and more effective than establishing a Mars colony. Even if planetary defenses fail and a strike happens, there is virtually nothing an asteroid could do to Earth that would make it as hostile to human life as Mars already is; even Chicxulub II would leave Earth with non-lethal atmospheric pressure, a radiation-blocking magnetic field, and oxygen, all of which Mars lacks. Musk and others promote Mars colonies as required by a cost/benefit analysis of the best way to discharge our obligation to ensure the survival of our species. **But their cost/benefit analysis only appears rational because they have carefully loaded the comparison scenarios in a way that guarantees a pro-colonization conclusion.** Musk is surely right that colonizing Mars is more prudent, from a species-preservation perspective, than sitting on our hands. But once we supply a third option it is clear that if there is a moral obligation to take instrumentally effective steps to safeguard the species, then investment in planetary defense and civilization protection, 6 not Mars colonization, is what is morally required (Baum 2016). This conclusion is not a consequence of pinchpenny aerospace budgets forcing a hard choice between promising options. If the goal is species survival, and given that the Martian environment is much less survivable than even a post-strike Earth would be, then there is no remotely realistic budget point at which the marginal dollar would be more effectively spent on Mars colonization than on protecting Earth and the creatures and civilizations that evolved to live within its shelters.

### 1NC – Warming

#### No extinction – it takes 12 degrees without adaptation

Farquhar et al 17 [Sebastian Farquhar (PhD Candidate in Philosophy at Oxford and Project Manager at Future of Humanity Institute), John Halstead (climate activist and one of the co-founders of 350 Indiana-Calumet), Owen Cotton-Barratt (PhD in pure mathematics at Oxford. Previously worked as an academic mathematician and as Director of Research at the Centre for Effective Altruism), Stefan Schubert (Researcher at Department of Experimental Psychology at University of Oxford), Haydn Belfield (Associate Fellow at the Leverhulme Centre for the Future of Intelligence. He has a background in policy and politics, including as a Senior Parliamentary Researcher to a British Shadow Cabinet Minister, as a Policy Associate to the University of Oxford’s Global Priorities Project, and a degree in Philosophy, Politics and Economics from Oriel College, University of Oxford), Andrew Snyder-Beattie (Director of Research at the Future of Humanity Institute at Oxford, Holds degrees in biomathematics and economics and is currently pursuing a PhD in Zoology at Oxford), Existential Risk: Diplomacy and Governance, Global Priorities Project (Bostrom’s Institute), 2017-01-23, https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf] TDI

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 – Cyber

#### No cyber impact – their authors are hacks

Valeriano 15 [(BRANDON VALERIANO is a Senior Lecturer in Social and Political Sciences at the University of Glasgow.) Internally cites (RYAN C. MANESS is a Visiting Fellow of Security and Resilience Studies at Northeastern University in Boston, Foreign Affairs) May 13, 2015, “The Coming Cyberpeace” 5/13/2015]

The era of cyberconflict is upon us; at least, experts seem to accept that cyberattacks are the new normal. In fact, however, evidence suggests that cyberconflict is not as prevalent as many believe. Likewise, the severity of individual cyber events is not increasing, even if the frequency of overall attacks has risen. And an emerging norm against the use of severe state-based cybertactics contradicts fear-mongering news reports about a coming cyberapocalypse. The few isolated incidents of successful state-based cyberattacks do not a trend make. Rather, what we are seeing is cyberespionage and probes, not cyberwarfare. Meanwhile, the international consensus has stabilized around a number of limited acceptable uses of cybertechnology—

one that prohibits any dangerous use of force.

Despite fears of a boom in cyberwarfare, there have been no major or dangerous hacks between countries. The closest any states have come to such events occurred when Russia attacked Georgian news outlets and websites in 2008; when Russian forces shut down banking, government, and news websites in Estonia in 2007; when Iran attacked the Saudi Arabian oil firm Saudi Aramco with the Shamoon virus in 2012; and when the United States attempted to sabotage Iran’s nuclear power systems from 2007 to 2011 through the Stuxnet worm. The attack on Sony from North Korea is just the latest overhyped cyberattack to date, as the corporate giant has recovered its lost revenues from the attack and its networks are arguably more resilient as a result. Even these are more probes into vulnerabilities than full attacks. Russia’s aggressions show that Moscow is willing to use cyberwarfare for disruption and propaganda, but not to inflict injuries or lasting infrastructural damage. The Shamoon incident allowed Iran to punish Saudi Arabia for its alliance with the United States as Tehran faced increased sanctions; the attack destroyed files on Saudi Aramco’s computer network but failed to do any lasting damage. The Stuxnet incident also failed to create any lasting damage, as Tehran put more centrifuges online to compensate for virus-based losses and strengthened holes in their system. Further, these supposedly successful cases of cyberattacks are balanced by many more examples of unsuccessful ones. If the future of cyberconflict looks like today, the international community must reassess the severity of the threat.

Cyberattacks have demonstrated themselves to be more smoke than fire. This is not to suggest that incidents are on the decline, however. Distributed denial-of-service attacks and infiltrations increase by the minute—every major organization is probed constantly, but only for weaknesses or new infiltration methods for potential use in the future. Probes and pokes do not destabilize states or change trends within international politics. Even common cyber actions have little effect on levels of cooperation and conflict between states.

NORMCORE IS HERE TO STAY

A protocol of restraint has emerged as the volume of cyberattacks has increased. State-based cyberattacks are expected, and in some cases tolerated, as long as they do not rise to the level of total offensive operations—direct and malicious incidents that could destroy infrastructure or critical facilities. These options are apparently off the table for states, since they would lead to physical confrontation, collateral damage, and economic retaliation.

The reproducibility of cyberattacks has also led states to exercise restraint. Enemies can replicate successful cyberweapons easily if source code and programs find their way into the wild or are reverse-engineered. Cyberweapons are not simple to design, either, which makes their use limited: Stuxnet took years of work by U.S. intelligence (with help from Israel) and cost hundreds of millions of dollars—and it still failed. The risk of creating collateral damage is high, since cyberweaponry cannot provide surgical precision and can spread into other networks of possible allies of the attackers. For example, the Stuxnet worm, intended for Iran’s nuclear program’s network, showed up in Azerbaijan, India, Indonesia, and Pakistan, among other countries. As witnessed in the Russian attack on Georgia, the potential for conflict diffusion is high, as third-party allies can enter conflicts easily. Estonia sent its Computer Emergency Readiness Team experts to Georgia to keep the country’s crucial networks up and running. Poland freed up bandwidth for servers in its territory to keep Georgian government websites up and its people informed. Finally, the risk of retaliation is high, as it is in any war, especially as attribution of perpetrators is getting easier to trace with better forensic techniques. The only drawback is that exposing attribution capabilities often exposes ongoing infiltration methods.

All of these considerations have meant that, so far, cyberconflict has adhered to existing international conflict norms. That there have been no major operations resulting in death or the destruction of physical equipment (outside of the Saudi Aramco incident and Stuxnet) suggests trends toward stability and safety. Cyberoperations are increasing, but only in terms of small-scale actions that have limited utility or damage potential. The truly dangerous cyberactions that many warn against have not occurred, even in situations where observers would think them most likely: within the Ukrainian conflict or during NATO’s 2011 operations in Libya. The only demonstrable cyberactivity in the Ukraine crisis has been espionage-level attacks. There is no propaganda, denial of service, or worm or virus activity, as there was in past conflicts involving Russia and post-Soviet states.

The overall trend in cyberwarfare indicates that the international community is enjoying a period of stability. The chart below demonstrates that although cybertactics are increasingly popular, the severity of these attacks remains low. On a scale of one to five, where one is a nuisance attack (a website being defaced, for example) and five is a cyber-related death, few attacks register above a two.

DRAWING COMPARISONS

Although the public may fear cyberthreats, it remains extremely trusting of the existing digital infrastructure. People trust the Internet with their connections, private contacts, banking information, personal lives, professional careers, and even romantic interests. Such confidence may be unwarranted, but resilience, not apprehension, is key to surviving in the coming era of low-level Internet-based attacks and probes.

States must be willing to make dramatic changes to their perceptions of Internet security and governance if they are to prevent cyberattacks. Most states lack functional cooperation between government and private industry for low-level cyber infiltrations, including the United States and EU countries. In addition to greater cooperation between public and private sectors, states and companies must pursue stronger cyberhygiene regimens (providing internal training to prevent potential threats) and reform the infrastructure that supports banking, electric, and health-care systems. Finally, education initiatives would help empower citizens to understand how the Web handles their transactions. Few understand how online banking, health-care databases, and utility grids work on the Internet. Education can help people—and citizens—understand the true nature of cyberthreats.

Here, we can look to the U.S. experience with terrorism: in both instances, fear is the result of imagined consequences. Terrorism has given birth to an industry built to combat threats, and a similar process is now under way with regard to cyberattacks. The general response to terrorism has been counterproductive and damaging, lending itself to hyperbole and overreaction. It is troubling to see the same path repeated with cyberwarfare, as an industry has sprung up within the private sector and military to meet the threat. The fact that there is little evidence of severe cyberattacks should give pause.

### 1NC – Disease

#### Burnout and variation check disease

York 14 (Ian, head of the Influenza Molecular Virology and Vaccines team in the Immunology and Pathogenesis Branch of the Influenza Division at the CDC, PhD in Molecular Virology and Immunology from McMaster University, M.Sc. in Veterinary Microbiology and Immunology from the University of Guelph, former Assistant Prof of Microbiology & Molecular Genetics at Michigan State, “Why Don't Diseases Completely Wipe Out Species?” 6/4/2014, http://www.quora.com/Why-dont-diseases-completely-wipe-out-species)

But mostly diseases don't drive species extinct. There are several reasons for that. For one, the most dangerous diseases are those that spread from one individual to another. If the disease is highly lethal, then the population drops, and it becomes less likely that individuals will contact each other during the infectious phase. Highly contagious diseases tend to burn themselves out that way.¶ Probably the main reason is variation. Within the host and the pathogen population there will be a wide range of variants. Some hosts may be naturally resistant. Some pathogens will be less virulent. And either alone or in combination, you end up with infected individuals who survive.¶ We see this in HIV, for example. There is a small fraction of humans who are naturally resistant or altogether immune to HIV, either because of their CCR5 allele or their MHC Class I type. And there are a handful of people who were infected with defective versions of HIV that didn't progress to disease. ¶ We can see indications of this sort of thing happening in the past, because our genomes contain many instances of pathogen resistance genes that have spread through the whole population. Those all started off as rare mutations that conferred a strong selection advantage to the carriers, meaning that the specific infectious diseases were serious threats to the species.

#### No extinction from disease – global dispersion, countermeasures, and evolution

Farquhar 17

Sebastian Farquhar is the director of the Global Priorities Project, Masters degree in Physics and Philosophy from the University of Oxford, Project Manager at FHI, John Halstead, DPhil in political Philosophy from St Anne’s College, Oxford, Global Priorities Project, 2017, “Existential Risk Diplomacy and Governance”, https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf

For most of human history, natural pandemics have posed the greatest risk of mass global fatalities.37 However, there are some reasons to believe that natural pandemics are very unlikely to cause human extinction. Analysis of the International Union for Conservation of Nature (IUCN) red list database has shown that of the 833 recorded plant and animal species extinctions known to have occurred since 1500, less than 4% (31 species) were ascribed to infectious disease.38 None of the mammals and amphibians on this list were globally dispersed, and other factors aside from infectious disease also contributed to their extinction. It therefore seems that our own species, which is very numerous, globally dispersed, and capable of a rational response to problems, is very unlikely to be killed off by a natural pandemic.

One underlying explanation for this is that highly lethal pathogens can kill their hosts before they have a chance to spread, so there is a selective pressure for pathogens not to be highly lethal. Therefore, pathogens are likely to co-evolve with their hosts rather than kill all possible hosts.39

#### Disease pandemics decrease the likelihood of war

Walt 20 (Stephen M. Walt is the Robert and Renée Belfer professor of international relations at Harvard University; “Will a Global Depression Trigger Another World War?”; Foreign Policy; May 13, 2020; https://foreignpolicy.com/2020/05/13/coronavirus-pandemic-depression-economy-world-war/; ERB)

By many measures, 2020 is looking to be the worst year that humankind has faced in many decades. We’re in the midst of a pandemic that has already claimed more than 280,000 lives, sickened millions of people, and is certain to afflict millions more before it ends. The world economy is in free fall, with unemployment rising dramatically, trade and output plummeting, and no hopeful end in sight. A plague of locusts is back for a second time in Africa, and last week we learned about murderous killer wasps threatening the bee population in the United States. Americans have a head-in-the-sand president who prescribes potentially lethal nostrums and ignores the advice of his scientific advisors. Even if all those things magically disappeared tomorrow—and they won’t—we still face the looming long-term danger from climate change. Given all that, what could possibly make things worse? Here’s one possibility: war. It is therefore worth asking whether the combination of a pandemic and a major economic depression is making war more or less likely. What does history and theory tell us about that question? For starters, we know neither plague nor depression make war impossible. World War I ended just as the 1918-1919 influenza was beginning to devastate the world, but that pandemic didn’t stop the Russian Civil War, the Russo-Polish War, or several other serious conflicts. The Great Depression that began in 1929 didn’t prevent Japan from invading Manchuria in 1931, and it helped fuel the rise of fascism in the 1930s and made World War II more likely. So if you think major war simply can’t happen during COVID-19 and the accompanying global recession, think again. But war could still be much less likely. The Massachusetts Institute of Technology’s Barry Posen has already considered the likely impact of the current pandemic on the probability of war, and he believes COVID-19 is more likely to promote peace instead. He argues that the current pandemic is affecting all the major powers adversely, which means it isn’t creating tempting windows of opportunity for unaffected states while leaving others weaker and therefore vulnerable. Instead, it is making all governments more pessimistic about their short- to medium-term prospects. Because states often go to war out of sense of overconfidence (however misplaced it sometimes turns out to be), pandemic-induced pessimism should be conducive to peace. Moreover, by its very nature war requires states to assemble lots of people in close proximity—at training camps, military bases, mobilization areas, ships at sea, etc.—and that’s not something you want to do in the middle of a pandemic. For the moment at least, beleaguered governments of all types are focusing on convincing their citizens they are doing everything in their power to protect the public from the disease. Taken together, these considerations might explain why even an impulsive and headstrong warmaker like Saudi Arabia’s Mohammed bin Salman has gotten more interested in winding down his brutal and unsuccessful military campaign in Yemen. Posen adds that COVID-19 is also likely to reduce international trade in the short to medium term. Those who believe economic interdependence is a powerful barrier to war might be alarmed by this development, but he points out that trade issues have been a source of considerable friction in recent years—especially between the United States and China—and a degree of decoupling might reduce tensions somewhat and cause the odds of war to recede. For these reasons, the pandemic itself may be conducive to peace. But what about the relationship between broader economic conditions and the likelihood of war? Might a few leaders still convince themselves that provoking a crisis and going to war could still advance either long-term national interests or their own political fortunes? Are the other paths by which a deep and sustained economic downturn might make serious global conflict more likely? One familiar argument is the so-called diversionary (or “scapegoat”) theory of war. It suggests that leaders who are worried about their popularity at home will try to divert attention from their failures by provoking a crisis with a foreign power and maybe even using force against it. Drawing on this logic, some Americans now worry that President Donald Trump will decide to attack a country like Iran or Venezuela in the run-up to the presidential election and especially if he thinks he’s likely to lose. This outcome strikes me as unlikely, even if one ignores the logical and empirical flaws in the theory itself. War is always a gamble, and should things go badly—even a little bit—it would hammer the last nail in the coffin of Trump’s declining fortunes. Moreover, none of the countries Trump might consider going after pose an imminent threat to U.S. security, and even his staunchest supporters may wonder why he is wasting time and money going after Iran or Venezuela at a moment when thousands of Americans are dying preventable deaths at home. Even a successful military action won’t put Americans back to work, create the sort of testing-and-tracing regime that competent governments around the world have been able to implement already, or hasten the development of a vaccine. The same logic is likely to guide the decisions of other world leaders too. Another familiar folk theory is “military Keynesianism.” War generates a lot of economic demand, and it can sometimes lift depressed economies out of the doldrums and back toward prosperity and full employment. The obvious case in point here is World War II, which did help the U.S economy finally escape the quicksand of the Great Depression. Those who are convinced that great powers go to war primarily to keep Big Business (or the arms industry) happy are naturally drawn to this sort of argument, and they might worry that governments looking at bleak economic forecasts will try to restart their economies through some sort of military adventure. I doubt it. It takes a really big war to generate a significant stimulus, and it is hard to imagine any country launching a large-scale war—with all its attendant risks—at a moment when debt levels are already soaring.

More importantly, there are lots of easier and more direct ways to stimulate the economy—infrastructure spending, unemployment insurance, even “helicopter payments”—and launching a war has to be one of the least efficient methods available. The threat of war usually spooks investors too, which any politician with their eye on the stock market would be loath to do. Economic downturns can encourage war in some special circumstances, especially when a war would enable a country facing severe hardships to capture something of immediate and significant value. Saddam Hussein’s decision to seize Kuwait in 1990 fits this model perfectly: The Iraqi economy was in terrible shape after its long war with Iran; unemployment was threatening Saddam’s domestic position; Kuwait’s vast oil riches were a considerable prize; and seizing the lightly armed emirate was exceedingly easy to do. Iraq also owed Kuwait a lot of money, and a hostile takeover by Baghdad would wipe those debts off the books overnight. In this case, Iraq’s parlous economic condition clearly made war more likely. Yet I cannot think of any country in similar circumstances today. Now is hardly the time for Russia to try to grab more of Ukraine—if it even wanted to—or for China to make a play for Taiwan, because the costs of doing so would clearly outweigh the economic benefits. Even conquering an oil-rich country—the sort of greedy acquisitiveness that Trump occasionally hints at—doesn’t look attractive when there’s a vast glut on the market. I might be worried if some weak and defenseless country somehow came to possess the entire global stock of a successful coronavirus vaccine, but that scenario is not even remotely possible. If one takes a longer-term perspective, however, a sustained economic depression could make war more likely by strengthening fascist or xenophobic political movements, fueling protectionism and hypernationalism, and making it more difficult for countries to reach mutually acceptable bargains with each other. The history of the 1930s shows where such trends can lead, although the economic effects of the Depression are hardly the only reason world politics took such a deadly turn in the 1930s. Nationalism, xenophobia, and authoritarian rule were making a comeback well before COVID-19 struck, but the economic misery now occurring in every corner of the world could intensify these trends and leave us in a more war-prone condition when fear of the virus has diminished. On balance, however, I do not think that even the extraordinary economic conditions we are witnessing today are going to have much impact on the likelihood of war. Why? First of all, if depressions were a powerful cause of war, there would be a lot more of the latter. To take one example, the United States has suffered 40 or more recessions since the country was founded, yet it has fought perhaps 20 interstate wars, most of them unrelated to the state of the economy. To paraphrase the economist Paul Samuelson’s famous quip about the stock market, if recessions were a powerful cause of war, they would have predicted “nine out of the last five (or fewer).” Second, states do not start wars unless they believe they will win a quick and relatively cheap victory. As John Mearsheimer showed in his classic book Conventional Deterrence, national leaders avoid war when they are convinced it will be long, bloody, costly, and uncertain. To choose war, political leaders have to convince themselves they can either win a quick, cheap, and decisive victory or achieve some limited objective at low cost. Europe went to war in 1914 with each side believing it would win a rapid and easy victory, and Nazi Germany developed the strategy of blitzkrieg in order to subdue its foes as quickly and cheaply as possible. Iraq attacked Iran in 1980 because Saddam believed the Islamic Republic was in disarray and would be easy to defeat, and George W. Bush invaded Iraq in 2003 convinced the war would be short, successful, and pay for itself. The fact that each of these leaders miscalculated badly does not alter the main point: No matter what a country’s economic condition might be, its leaders will not go to war unless they think they can do so quickly, cheaply, and with a reasonable probability of success. Third, and most important, the primary motivation for most wars is the desire for security, not economic gain. For this reason, the odds of war increase when states believe the long-term balance of power may be shifting against them, when they are convinced that adversaries are unalterably hostile and cannot be accommodated, and when they are confident they can reverse the unfavorable trends and establish a secure position if they act now. The historian A.J.P. Taylor once observed that “every war between Great Powers [between 1848 and 1918] … started as a preventive war, not as a war of conquest,” and that remains true of most wars fought since then. The bottom line: Economic conditions (i.e., a depression) may affect the broader political environment in which decisions for war or peace are made, but they are only one factor among many and rarely the most significant. Even if the COVID-19 pandemic has large, lasting, and negative effects on the world economy—as seems quite likely—it is not likely to affect the probability of war very much, especially in the short term.