### 1NC---T

#### Interp: “appropriation” of outer space must be claims of sovereignty.

#### Ownership of extracted resources is NOT appropriation.

Wrench 19 [John G., J.D. Candidate, Case Western Reserve University School of Law, Cleveland, Ohio, May 2019; B.A., Philosophy & Religious Studies, Pace University, Pleasantville, New York, December 2015. Case Western Journal of International Law; Volume 51, Issue 1, Article 11, “Non-Appropriation, No Problem: The Outer Space Treaty Is Ready for Asteroid Mining” <https://scholarlycommons.law.case.edu/cgi/viewcontent.cgi?article=2546&context=jil>] brett

Secondly, even if nations, businesses, and individuals are equally bound by the non-appropriation principle, the scope of that restriction is not entirely clear from the text of Article II.59 It is unlikely, however, that the non-appropriation principle is an absolute ban on the ownership of resources extracted in outer space.

An interpretation of Article II supporting a blanket ban on resource ownership is unwarranted by the text of the OST and illfounded on account of the international community’s common practices. Scholars have noted that the international community has never questioned whether scientific samples harvested from celestial bodies belong to the extracting nation.60 Furthermore, space-faring members of the international community rejected the Moon Treaty precisely because it prohibited all forms of ownership in resources extracted from celestial bodies.61 The space-faring nations’ support for the OST, coupled with their rejection of an alternative set of rules governing extracted resources, is at the very least an indication of what those nations believe the non-appropriation principle to stand for.

#### Violation: The AFF defends property rights for extracted resources.

#### Negate:

#### 1] Precision: Pre-round prep is centered around DAs against formal sovereignty and case responses to it, their interp means the only basis for predictability becomes the wiki, which moots all pre-topic prep. Err towards common interpretation of international law spanning decades.

#### 2] Limits: They blow up the topic to include any resource extraction from outer space, allowing affs to rush to the margins to anything from moon water to mars rocks to any asteroid in outer space, and infinite permutations of these make the case-list too big to engage, mooting neg ground.

#### CI bc reasonability is arbitrary and invites judge intervention

#### DTD to deter future abuse

#### No RVIs: 1] illogical, you shouldn’t win for being topical, 2] good theory debaters will read abusive positions to bait theory and dump on an RVI, 3] trades off with substance since we can’t kick out of T

### 1NC – DA - USICA

#### USICA passes now.

Flatly and Edgerton 1-12 [Daniel Flatley, reporter on foreign policy, Anna Edgerton, Bloomberg journalist, 1-12-2022, "House Leaders Near Agreement on Stalled China Competition Bill," Bloomberg, <https://www.bloomberg.com/news/articles/2022-01-12/house-leaders-assembling-compromise-on-china-competition-bill> [accessed 1-14-22] Lydia

The U.S. House of Representatives is preparing to move forward on a China competitiveness bill that would authorize billions of dollars in funding to bolster U.S. research and development as well as aid for the domestic semiconductor industry, according to a leadership aide. The move comes after Senate Majority Leader Chuck Schumer and House Speaker Nancy Pelosi in November announced a deal to find a way to get the U.S. Innovation and Competition Act through Congress after the Senate had passed it in June. The legislation, which has bipartisan support, is a major legislative priority for Schumer and the Biden administration. There is no timing yet on a vote, but the bill’s supporters say agreement on its contents must be reached before midterm election campaigns are in full swing, and compromise becomes even more difficult in the Capitol.  The administration has been pressing House leadership to take action on the measure, including the nearly $52 billion in grants and incentives it would provide for the semiconductor industry amid a global chip shortage. Commerce Secretary Gina Raimondo and President Joe Biden were expected to reach out to Pelosi directly on the package, according to Senator John Cornyn, a Texas Republican and sponsor of the semiconductor provision, who said he spoke to Raimondo about the matter. Pelosi has told the chairs of several committees -- including Science, Foreign Affairs and Energy and Commerce -- to draft proposals for a piece of legislation the House can take to conference with the Senate, with the aim of getting a bill both chambers agree on. The House Science Committee earlier passed several bipartisan measures that included similar elements to the Senate bill but were not packaged together. The Foreign Affairs panel, which is expected to play a major role in the legislation, approved a China competitiveness bill last year that Republicans attacked as too soft on Beijing and too focused on climate change. That bill has since stalled in the House. Foreign Affairs Chair Gregory Meeks reiterated his commitment to the climate portions of the bill in November, saying it was “tremendously important” and that he would not simply approve what the Senate had passed. The bill has a narrow path to success in the House -- much narrower in some ways than in the Senate, where it made it through on a 68-32 tally. Representative Cathy McMorris Rodgers of Washington State, the top Republican on the Energy and Commerce Committee, called an earlier version of USICA a repeat of “the mistakes of the Obama-Biden Administration.” And the Republican Study Committee, which boasts a large membership in the House, also has panned the legislation. Progressive Concerns On the other end of the political spectrum, some progressive groups have criticized the bill as too aggressively focused on competition with China -- an approach they say could ignite a new cold war. They advocate a more collaborative approach in a [letter](https://quincyinst.org/2021/05/17/65-orgs-cold-war-with-china-is-a-dangerous-and-self-defeating-strategy/) posted to the Quincy Institute website in May. But business groups, including the Semiconductor Industry Association, have pushed Congress to pass a bill that addresses competition with China, particularly boosting domestic chip manufacturing. The chief executives of several companies, including Tim Cook of [Apple Inc.](https://www.bloomberg.com/quote/AAPL:US), Sundar Pichai of Google parent [Alphabet Inc.](https://www.bloomberg.com/quote/GOOGL:US) and Mary Barra of [General Motors Co.](https://www.bloomberg.com/quote/GM:US) wrote a letter late last year calling on Congress to pass the measure.

#### But, partisan legislation trades off.

Segers 21 [Grace, Staff writer at The New Republic, “A New Year’s Resolution for Congress: Finish What You Started in 2021,” TNR, 12/22/2021, <https://newrepublic.com/article/164719/congress-democrats-2022-agenda>] recut lydia

But lo, there are also several things that Congress wants to do. The U.S. Innovation and Competition Act, formerly known by the far cooler title of the Endless Frontier Act, is at the top of the list. The Senate earlier this year passed the legislation known as USICA that aims to increase competitiveness with China; it has since stalled in the House. In November, Schumer and Speaker Nancy Pelosi announced that the bill would go through the bicameral conference process, in which both chambers work together to reconcile their differences. Most legislation these days is preconferenced, which means that committee chairs come to an agreement before a bill even gets to the floor to ensure that it will be able to pass both houses. So actually going through the conferencing process is a somewhat unusual step for the modern Congress.

Funding the government, the NDAA and USICA provide rare opportunities for bipartisanship on the Hill. GOP Senator John Cornyn told The New Republic that USICA was perhaps “something that we can get done early.” “The closer we get to the midterms, hopefully our Democratic colleagues will have a little less appetite for purely partisan legislation,” Cornyn said. “I’m confident that we’ll find some things to work on together while we continue to fight like cats and dogs.”

#### That’s the plan. NewSpace companies will lobby for their survival, spurring partisan division.

GC 17 [GC Magazine; Autumn 2017; Business thinking, In-house management, Published by legal500; “The new space race,” <https://www.legal500.com/gc-magazine/feature/the-new-space-race/>] brett

The upshot is that the ability to engage with legislators and policymakers will be essential for the long-term viability of companies like Planetary Resources.

‘We’re seeing already that with a regulatory framework laid out for a very quickly growing and expanding sector, there’s a lot of opportunity for policy engagement. That’s equally true in other countries too, which are either enacting their first national space laws or overhauling them,’ says Israel.

Before Israel joined the company, Planetary Resources was heavily involved in lobbying the US Congress to support the Spurring Private Aerospace Competitiveness and Entrepreneurship Act – better known as the SPACE Act.

That piece of legislation explicitly granted permission to US entities to ‘engage in the commercial exploration and exploitation of “space resources”.’ But the international community remains divided over whether the SPACE Act runs contrary to the obligations imposed on the US under the Outer Space Treaty.

‘The Americans are a sovereign state and according to their international treaty commitments, it’s hard to say that their domestic law is compatible with international law,’ says Smith.

Lobbying, both at a domestic and international level, stands to become increasingly critical, particularly as the US is in the process of crafting a framework for supervising non-governmental space activities, while ensure conformity with the Outer Space Treaty.

image of cartoon Mars Rover

‘It is incumbent on Congress to use the 50-year anniversary of the Outer Space Treaty to properly determine our actual international obligations, decide if specific articles in the Treaty are self-executing or not, and ensure that our domestic policy moving forward creates an environment that provides certainty for industry while protecting our national security,’ said Senator Ted Cruz, earlier this year.

‘The design and objectives in doing this must not only be to implement the government’s obligations, but to do so in a way that is not unduly burdensome on emerging space activities,’ adds Israel.

‘This is particularly relevant when the exact contours of how the activity will be carried out are not known, which makes it imperative that the regulators do not get too far ahead of the technology and make guesses about how it will be done, what is feasible, then lock in standards that are ultimately irrelevant and unworkable.’

#### Key to tech leadership.

Murray 21 [Ashley, Post-Gazette Washington Bureau, “Tech bills in U.S. Congress could be 'generational opportunity' for Pittsburgh,” Post-Gazette, 12/19/2021, https://www.post-gazette.com/news/politics-nation/2021/12/19/Tech-bills-U-S-Congress-Pittsburgh-China-Argo-AI-5G-robotics-USICA-innovation-competition-act/stories/202112190108]

WASHINGTON — A proposal in Congress to boost U.S. competitiveness in advanced technology could mean millions of education and industry dollars for the region and be a “generational opportunity” for Pittsburgh, a city that boasts its status as the birthplace of driverless tech and the cradle of numerous start-ups.

Bills in both chambers outline billions in investment to support initiatives all the way from K-12 STEM education to semiconductors, quantum computing, climate science research and “high intensity laser” exploration. And could ensure U.S. leadership and security — namely from China’s creeping dominance — for decades to come, advocates and lawmakers on both sides of the aisle say.

While the D.C. spotlight has been focused on the massive bipartisan infrastructure law and President Joe Biden’s stalled social and climate spending bill, tech insiders in Pittsburgh see the innovation-focused legislation as one of the most significant moves the U.S. could make.

Under consideration is an estimated $200 billion Senate bill titled the U.S. Innovation and Competition Act, or USICA. The sprawling, bipartisan 2,000-page proposal aims to establish National Science Foundation programs for the commercialization of artificial intelligence, advanced computing and other areas while also protecting domestic research and expanding trade provisions with China.

On the House side, bipartisan support is strong for multiple bills that would double the National Science Foundation research funding to $78 billion over five years and direct $50 billion over the same time period for Department of Energy projects.

“This is a generational scale investment in that type of economic development, in strengthening our core research universities, but also putting money in there for translational research [to private industry],” said Brian Kennedy, senior vice president of operations and government affairs for the Pittsburgh Technology Council, which represents 1,000 companies in the Pittsburgh region.

The tech leader estimates that in “the very short term” roughly $100 million to $200 million in funding could roll into southwestern Pennsylvania.

“But in all honesty I think that’s just the tip of the iceberg,” said Mr. Kennedy, who cited what previous investments have done for the university lab-to-company pipeline.

“If you look at Pittsburgh’s story in terms of tech, it’s really hard to tell it without mentioning Carnegie Mellon and the University of Pittsburgh,” he continued.

Mr. Kennedy traced the thread from inside the robotics and computer science labs to the marquee Pittsburgh-based manufacturing hubs and tech companies across the city. Carnegie Mellon University’s Advanced Robotics Institute established itself where once the city’s steel mills sat on Hazelwood Green. Argo AI has led Pittsburgh to the forefront of autonomous vehicle testing, he said, and Astrobotic soon will direct a mission to the moon from its North Side-based control room.

“It’s the kind of investments that are front-and-center on the planet right now — AI, biotechnology, cybersecurity. These are all the core capabilities of Pittsburgh, and they’re also the core things pressing everyone on the planet.”

China

China’s advances in technological innovation have become a top concern among tech leaders, defense officials and lawmakers.

The world’s second largest economy became the top manufacturer of high-tech goods in 2020, and it either already has sped ahead or is poised to overtake the U.S. in the next decade in various advanced technologies, according to a report published this month by the Harvard Kennedy School.

China has become a major competitor to the U.S. in artificial intelligence, and America’s 5G infrastructure rollout is years behind its rival, the study reported. Additionally, the report asserts that while the U.S. is a leader in other areas, including semiconductor design, green energy and cell therapy, China is building competitive capacity in manufacturing and biotechnology.

This leads some experts to conclude that America’s plan is behind the curve.

“I wish they passed this bill 10 years ago,” said Kevin Chen, a professor with the University of Pittsburgh’s Swanson School of Engineering.

“This is really a no brainer. I can tell you what happens if this bill is not passed. The United States as a country is going to continue to under invest in technology, especially in this important technology,” he said.

“Think about 5G. The U.S. government didn’t invest a lot of R&D into 5G. Who’s leading right now? I think you know that: Huawei,” he said, referring to the Chinese tech company. “... You don’t want to be in that situation for semiconductors.”

In either substance or rhetoric, both U.S. chambers point to the innovation bills as an answer to this threat.

The Senate version cites China hundreds of times regarding policies limiting cooperation with the nation, lists page after page on the flow of goods, and promotes a “Buy America” strategy.

The bill also outlines ways to tackle security of research developed in the United States, which Mr. Kennedy sees as a possible snag in the proposal for academics.

“There’s a lot of concern about how that might get played out in actuality, how that might actually hurt competitiveness of American universities and hurt the transparency of research we do that’s meant for the world,” he said.

A Republican aide who is knowledgeable of the House versions said that lawmakers on both sides of the aisle are trying to chart a middle path between global innovation and U.S. intellectual property.

“International collaboration is critical for scientific progress, and we certainly don’t want to harm that, but we need to find a balance between protecting taxpayer-funded research from theft while encouraging the collaboration that has always made science successful,” the aide said.

However, Mr. Kennedy and others say the potential fruits of the plan appear too sweet to limit the focus just to China.

Zoning in on China is a “one dimensional way of thinking of it,” said Stephen Herzenberg, economist and executive director of the progressive Keystone Research Center.

“Many other countries have been constructively nationalist when it comes to manufacturing policy for a long time, think of Germany and Japan,” he said. “... The bottom line is [a nationwide manufacturing policy] would help a lot.”

A Democratic House aide noted that  the “bills are certainly broader than China.”

“It’s very much sort of taking stock of U.S. leadership and U.S. competitiveness challenged by any comer and making sure that U.S. is equipped to respond and lead and succeed in the face of the rest of the world, which is not standing idly by,” the aide said.

#### Chinese tech supremacy causes nuclear war.

Kroenig 18 [Matthew, Deputy Director for Strategy, Scowcroft Center for Strategy and Security; Associate Professor of Government and Foreign Service, Georgetown University, “Will disruptive technology cause nuclear war?” The Bulletin, 11/12/2018, https://thebulletin.org/2018/11/will-disruptive-technology-cause-nuclear-war/]

Recently, analysts have argued that emerging technologies with military applications may undermine nuclear stability (see here, here, and here), but the logic of these arguments is debatable and overlooks a more straightforward reason why new technology might cause nuclear conflict: by upending the existing balance of power among nuclear-armed states. This latter concern is more probable and dangerous and demands an immediate policy response.

For more than 70 years, the world has avoided major power conflict, and many attribute this era of peace to nuclear weapons. In situations of mutually assured destruction (MAD), neither side has an incentive to start a conflict because doing so will only result in its own annihilation. The key to this model of deterrence is the maintenance of secure second-strike capabilities—the ability to absorb an enemy nuclear attack and respond with a devastating counterattack.

Recently analysts have begun to worry, however, that new strategic military technologies may make it possible for a state to conduct a successful first strike on an enemy. For example, Chinese colleagues have complained to me in Track II dialogues that the United States may decide to launch a sophisticated cyberattack against Chinese nuclear command and control, essentially turning off China’s nuclear forces. Then, Washington will follow up with a massive strike with conventional cruise and hypersonic missiles to destroy China’s nuclear weapons. Finally, if any Chinese forces happen to survive, the United States can simply mop up China’s ragged retaliatory strike with advanced missile defenses. China will be disarmed and US nuclear weapons will still be sitting on the shelf, untouched.

If the United States, or any other state acquires such a first-strike capability, then the logic of MAD would be undermined. Washington may be tempted to launch a nuclear first strike. Or China may choose instead to use its nuclear weapons early in a conflict before they can be wiped out—the so-called “use ‘em or lose ‘em” problem.

According to this logic, therefore, the appropriate policy response would be to ban outright or control any new weapon systems that might threaten second-strike capabilities.

This way of thinking about new technology and stability, however, is open to question. Would any US president truly decide to launch a massive, bolt-out-of-the-blue nuclear attack because he or she thought s/he could get away with it? And why does it make sense for the country in the inferior position, in this case China, to intentionally start a nuclear war that it will almost certainly lose? More important, this conceptualization of how new technology affects stability is too narrow, focused exclusively on how new military technologies might be used against nuclear forces directly.

Rather, we should think more broadly about how new technology might affect global politics, and, for this, it is helpful to turn to scholarly international relations theory. The dominant theory of the causes of war in the academy is the “bargaining model of war.” This theory identifies rapid shifts in the balance of power as a primary cause of conflict.

International politics often presents states with conflicts that they can settle through peaceful bargaining, but when bargaining breaks down, war results. Shifts in the balance of power are problematic because they undermine effective bargaining. After all, why agree to a deal today if your bargaining position will be stronger tomorrow? And, a clear understanding of the military balance of power can contribute to peace. (Why start a war you are likely to lose?) But shifts in the balance of power muddy understandings of which states have the advantage.

You may see where this is going. New technologies threaten to create potentially destabilizing shifts in the balance of power.

For decades, stability in Europe and Asia has been supported by US military power. In recent years, however, the balance of power in Asia has begun to shift, as China has increased its military capabilities. Already, Beijing has become more assertive in the region, claiming contested territory in the South China Sea. And the results of Russia’s military modernization have been on full display in its ongoing intervention in Ukraine.

Moreover, China may have the lead over the United States in emerging technologies that could be decisive for the future of military acquisitions and warfare, including 3D printing, hypersonic missiles, quantum computing, 5G wireless connectivity, and artificial intelligence (AI). And Russian President Vladimir Putin is building new unmanned vehicles while ominously declaring, “Whoever leads in AI will rule the world.”

If China or Russia are able to incorporate new technologies into their militaries before the United States, then this could lead to the kind of rapid shift in the balance of power that often causes war.

If Beijing believes emerging technologies provide it with a newfound, local military advantage over the United States, for example, it may be more willing than previously to initiate conflict over Taiwan. And if Putin thinks new tech has strengthened his hand, he may be more tempted to launch a Ukraine-style invasion of a NATO member.

Either scenario could bring these nuclear powers into direct conflict with the United States, and once nuclear armed states are at war, there is an inherent risk of nuclear conflict through limited nuclear war strategies, nuclear brinkmanship, or simple accident or inadvertent escalation.

This framing of the problem leads to a different set of policy implications. The concern is not simply technologies that threaten to undermine nuclear second-strike capabilities directly, but, rather, any technologies that can result in a meaningful shift in the broader balance of power. And the solution is not to preserve second-strike capabilities, but to preserve prevailing power balances more broadly.

When it comes to new technology, this means that the United States should seek to maintain an innovation edge. Washington should also work with other states, including its nuclear-armed rivals, to develop a new set of arms control and nonproliferation agreements and export controls to deny these newer and potentially destabilizing technologies to potentially hostile states.

These are no easy tasks, but the consequences of Washington losing the race for technological superiority to its autocratic challengers just might mean nuclear Armageddon

### 1NC – DA – mining

#### Space mining is key to sustain global resources -- otherwise, resource wars.

MacWhorter 16 [Kevin; J.D. Candidate, William & Mary Law School, "Sustainable Mining: Incentivizing Asteroid Mining in the Name of Environmentalism", William & Mary Environmental Law and Policy Review, Vol 40, Issue 2, Article 11, <https://scholarship.law.wm.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1653&context=wmelpr>] brett

A. Rare Element Mining on Earth

In the next sixty years, scientists predict that certain elements crucial to modern industry such as platinum, zinc, copper, phosphorous, lead, gold, and indium could be exhausted on Earth. 12 Many of these have no synthetic alternative, unlike chemical elements such as oil or diamonds.13 Liquid-crystal display (LCD) televisions, cellphones, and laptops are among the various consumer technologies that use precious metals.14Further, green technologies including wind turbines, solar panels, and catalytic converters require these rare elements. 15 As demand rises for both types of technologies, and as reserves of rare metals fall, prices skyrocket.16 Demand for nonrenewable resources creates conflict, and consumerism in rich countries results in harsh labor treatment for poorer countries.17

In general, the mining industry is extremely destructive to Earth’s environment.18 In fact, depending on the method employed, mining can destroy entire ecosystems by polluting water sources and contributing to deforestation.19 It is by its nature an unsustainable practice, because it involves the extraction of a finite and non-renewable resource.20 Moreover, by extracting tiny amounts of metals from relatively large quantities of ore, the mining industry contributes the largest portion of solid wastes in the world.21 The Environmental Protection Agency (EPA) describes the industry as the source of more toxic and hazardous waste than any other industrial sector [in the United States], costing billions of dollars to address the public health and environmental threats to communities. 22 Poor regulations and oxymoronic corporate definitions of sustainability, however, make it unclear as to just how much waste the industry actually produces.23

Platinum provides an excellent case study of the issue, because it is an extremely rare and expensive metal—an ore expected to exist in vast quantities in asteroids.24 Further, production of platinum has increased sharply in the past sixty years in order to keep up with growing demand for use in new technologies.25 In fact, despite their high costs, platinum group metals are so useful that [one] of [four] industrial goods on Earth require them in production. 26 Scholars do not expect demand to slow any time soon.27 Among other technologies, industries use platinum in products such as catalytic converters, jewelry production, various catalysts for chemical processing, and hydrogen fuel cells.28 While there is no consensus on how far the Earth’s reserves of platinum will take humanity, many scientists agree that platinum ore reserves will deplete in a relatively short amount of time.29

With the rate of mining at an all-time high,30 it is increasingly clear that historical patterns of mineral resources and development cannot simply be assumed to continue unaltered into the future. 31 The platinum mining industry, however, has a strong incentive to increase its rate of extraction as profits grow with the rate of demand. Without any alternative, this destructive practice will continue into the future.32

So-called platinum-group metal (PGM) ores are mined through underground or open cut techniques.33 Due to these practices, all but a very small fraction of the mined platinum ore is disposed of as solid waste.34 The environmental consequences of platinum production are thus quite significant, but like the mining industry in general, the amount of waste is typically under-reported.35

While this is due to high production levels at the moment, those levels will only increase given the estimated future demand of platinum.36 In spite of the negative consequences, mining continues unabated because it is economically important to many areas.37 The future environmental costs provide a major challenge in creating a sustainable system. Relegating at least some mining companies to near-Earth asteroids would reduce the negative effects of future mining levels on Earth. The economic benefits of mining need not be sacrificed for the sake of the environment.38

#### Terrestrial resource scarcity goes nuclear---we outweigh on timeframe, just the prospect of shortages triggers escalation.

Klare 13 [Michael T., The Nation’s defense correspondent, is professor emeritus of peace and world-security studies at Hampshire College and senior visiting fellow at the Arms Control Association in Washington, D.C. His newest book, All Hell Breaking Loose: The Pentagon’s Perspective on Climate Change, will be published this fall. 2013. “How Resource Scarcity and Climate Change Could Produce a Global Explosion,” <https://www.thenation.com/article/archive/how-resource-scarcity-and-climate-change-could-produce-global-explosion/>] brett

Brace yourself. You may not be able to tell yet, but according to global experts and the US intelligence community, the earth is already shifting under you. Whether you know it or not, you’re on a new planet, a resource-shock world of a sort humanity has never before experienced.

Two nightmare scenarios—a global scarcity of vital resources and the onset of extreme climate change—are already beginning to converge and in the coming decades are likely to produce a tidal wave of unrest, rebellion, competition and conflict. Just what this tsunami of disaster will look like may, as yet, be hard to discern, but experts warn of “water wars” over contested river systems, global food riots sparked by soaring prices for life’s basics, mass migrations of climate refugees (with resulting anti-migrant violence) and the breakdown of social order or the collapse of states. At first, such mayhem is likely to arise largely in Africa, Central Asia and other areas of the underdeveloped South, but in time, all regions of the planet will be affected.

To appreciate the power of this encroaching catastrophe, it’s necessary to examine each of the forces that are combining to produce this future cataclysm.

Resource Shortages and Resource Wars

Start with one simple given: the prospect of future scarcities of vital natural resources, including energy, water, land, food and critical minerals. This in itself would guarantee social unrest, geopolitical friction and war.

It is important to note that absolute scarcity doesn’t have to be on the horizon in any given resource category for this scenario to kick in. A lack of adequate supplies to meet the needs of a growing, ever more urbanized and industrialized global population is enough. Given the wave of extinctions that scientists are recording, some resources—particular species of fish, animals and trees, for example—will become less abundant in the decades to come, and may even disappear altogether. But key materials for modern civilization like oil, uranium and copper will simply prove harder and more costly to acquire, leading to supply bottlenecks and periodic shortages.

Oil—the single most important commodity in the international economy—provides an apt example. Although global oil supplies may actually grow in the coming decades, many experts doubt that they can be expanded sufficiently to meet the needs of a rising global middle class that is, for instance, expected to buy millions of new cars in the near future. In its 2011 World Energy Outlook, the International Energy Agency claimed that an anticipated global oil demand of 104 million barrels per day in 2035 will be satisfied. This, the report suggested, would be thanks in large part to additional supplies of “unconventional oil” (Canadian tar sands, shale oil and so on), as well as 55 million barrels of new oil from fields “yet to be found” and “yet to be developed.”

However, many analysts scoff at this optimistic assessment, arguing that rising production costs (for energy that will be ever more difficult and costly to extract), environmental opposition, warfare, corruption and other impediments will make it extremely difficult to achieve increases of this magnitude. In other words, even if production manages for a time to top the 2010 level of 87 million barrels per day, the goal of 104 million barrels will never be reached and the world’s major consumers will face virtual, if not absolute, scarcity.

Water provides another potent example. On an annual basis, the supply of drinking water provided by natural precipitation remains more or less constant: about 40,000 cubic kilometers. But much of this precipitation lands on Greenland, Antarctica, Siberia and inner Amazonia where there are very few people, so the supply available to major concentrations of humanity is often surprisingly limited. In many regions with high population levels, water supplies are already relatively sparse. This is especially true of North Africa, Central Asia and the Middle East, where the demand for water continues to grow as a result of rising populations, urbanization and the emergence of new water-intensive industries. The result, even when the supply remains constant, is an environment of increasing scarcity.

Wherever you look, the picture is roughly the same: supplies of critical resources may be rising or falling, but rarely do they appear to be outpacing demand, producing a sense of widespread and systemic scarcity. However generated, a perception of scarcity—or imminent scarcity—regularly leads to anxiety, resentment, hostility and contentiousness. This pattern is very well understood, and has been evident throughout human history.

In his book Constant Battles, for example, Steven LeBlanc, director of collections for Harvard’s Peabody Museum of Archaeology and Ethnology, notes that many ancient civilizations experienced higher levels of warfare when faced with resource shortages brought about by population growth, crop failures or persistent drought. Jared Diamond, author of the bestseller Collapse, has detected a similar pattern in Mayan civilization and the Anasazi culture of New Mexico’s Chaco Canyon. More recently, concern over adequate food for the home population was a significant factor in Japan’s invasion of Manchuria in 1931 and Germany’s invasions of Poland in 1939 and the Soviet Union in 1941, according to Lizzie Collingham, author of The Taste of War.

Although the global supply of most basic commodities has grown enormously since the end of World War II, analysts see the persistence of resource-related conflict in areas where materials remain scarce or there is anxiety about the future reliability of supplies. Many experts believe, for example, that the fighting in Darfur and other war-ravaged areas of North Africa has been driven, at least in part, by competition among desert tribes for access to scarce water supplies, exacerbated in some cases by rising population levels.

“In Darfur,” says a 2009 report from the UN Environment Programme on the role of natural resources in the conflict, “recurrent drought, increasing demographic pressures, and political marginalization are among the forces that have pushed the region into a spiral of lawlessness and violence that has led to 300,000 deaths and the displacement of more than two million people since 2003.”

Anxiety over future supplies is often also a factor in conflicts that break out over access to oil or control of contested undersea reserves of oil and natural gas. In 1979, for instance, when the Islamic revolution in Iran overthrew the Shah and the Soviets invaded Afghanistan, Washington began to fear that someday it might be denied access to Persian Gulf oil. At that point, President Jimmy Carter promptly announced what came to be called the Carter Doctrine. In his 1980 State of the Union Address, Carter affirmed that any move to impede the flow of oil from the Gulf would be viewed as a threat to America’s “vital interests” and would be repelled by “any means necessary, including military force.”

In 1990, this principle was invoked by President George H.W. Bush to justify intervention in the first Persian Gulf War, just as his son would use it, in part, to justify the 2003 invasion of Iraq. Today, it remains the basis for US plans to employ force to stop the Iranians from closing the Strait of Hormuz, the strategic waterway connecting the Persian Gulf to the Indian Ocean through which about 35 percent of the world’s seaborne oil commerce passes.

Recently, a set of resource conflicts have been rising toward the boiling point between China and its neighbors in Southeast Asia when it comes to control of offshore oil and gas reserves in the South China Sea. Although the resulting naval clashes have yet to result in a loss of life, a strong possibility of military escalation exists. A similar situation has also arisen in the East China Sea, where China and Japan are jousting for control over similarly valuable undersea reserves. Meanwhile, in the South Atlantic Ocean, Argentina and Britain are once again squabbling over the Falkland Islands (called Las Malvinas by the Argentinians) because oil has been discovered in surrounding waters.

By all accounts, resource-driven potential conflicts like these will only multiply in the years ahead as demand rises, supplies dwindle and more of what remains will be found in disputed areas. In a 2012 study titled Resources Futures, the respected British think-tank Chatham House expressed particular concern about possible resource wars over water, especially in areas like the Nile and Jordan River basins where several groups or countries must share the same river for the majority of their water supplies and few possess the wherewithal to develop alternatives. “Against this backdrop of tight supplies and competition, issues related to water rights, prices, and pollution are becoming contentious,” the report noted. “In areas with limited capacity to govern shared resources, balance competing demands, and mobilize new investments, tensions over water may erupt into more open confrontations.”

### 1NC -- CP

#### States should:

#### ---Ratify and enact into all relevant domestic legislation the Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects.

#### ---Establish and ratify an international agreement that would create a uniform, internationally recognized property rights regime for appropriation of outer space through asteroid mining by private entities.

#### ---Establish a global organization that monitors all asteroid movement missions and adopt their recommendations.

#### [1st plank] PPWT solves space militarization.

Jaramillo 09 [Cesar, In 2013 he earned a B.A. in Catholic Studies from Seton Hall University. Father Jaramillo earned the S.T.B. (Theology) and the J.C.L. (Canon Law) degrees from the Pontifical Gregorian University in Rome in 2016 and 2019 respectively. He also earned a Diploma in Administrative Canonical Praxis from the Vatican’s Congregation for the Clergy in 2018. Fr. Jaramillo is a member of the Canon Law Society of America. The Ploughshares Monitor Winter 2009 Volume 30 Issue 4, “In Defence of the PPWT Treaty: Toward a Space Weapons Ban” <https://ploughshares.ca/pl_publications/in-defence-of-the-ppwt-treaty-toward-a-space-weapons-ban/>] brett

The existing legal regime that tackles the potential weaponization of outer space is outdated, inadequate, and insufficient. Moreover, the rapidity with which space-related technologies are being developed seems to be widening the gap between military applications that may affect space assets and the precarious normative architecture that should regulate them. The fact that space will inevitably become more complex and congested each year underscores the need for a comprehensive space security treaty that builds on what little international law exists in this realm and not only reflects current threats to space security, but also tackles the emerging legal questions that inevitably arise as space becomes a more convoluted domain.

The PPWT—while not perfect and subject to revisions—represents what is undoubtedly the most substantive effort thus far to embed the oft-expressed desire to maintain a weapons-free outer space in international treaty law. It is true that the 1967 Outer Space Treaty specifically bans signatory states from placing nuclear weapons and other weapons of mass destruction in orbit and calls for the peaceful exploration of outer space. However, it does not explicitly refer to the placement or use of other types of weapons in outer space or the use of earth-based weapons against space targets—activities which clearly need regulation, if not outright prohibition.

It is often said that the perils inherent to the indiscriminate weaponization of space are perhaps only comparable to those posed by nuclear weapons, although much of this assessment rests on speculation, since outer space has not yet seen a scenario of direct military confrontation. Indeed, it is assumed that there have been no weapons placed in space to date as there have been neither claims nor denunciations of such behaviour by any state, and considerable efforts are being made in diverse governmental and nongovernmental circles to ensure that this delicate threshold is preserved. To be sure, a distinction must be made between militarization and weaponization: while the former has arguably already happened, given the widespread use of satellites for military applications such as reconnaissance and intelligence, it is the latter that is the primary focus of proponents of a space security treaty.

Not surprisingly, a resolution on the Prevention of an Arms Race in Outer Space (PAROS) has been introduced at both the CD and the First Committee of the UN General Assembly and has garnered near-unanimous support year after year—with the notable exception of the United States and Israel.1 In this context, the PPWT draft treaty introduced at the CD in February 2008 has been touted as a practical way to “nip the problem of PAROS in the bud” (UNIDIR 2008, p. 147). If there is a ban on space weapons, the rationale goes, there will be no arms race to prevent.

The PPWT draft treaty

What, then, makes the PPWT proposal worthy of serious consideration by the international community? In other words, why is it an appealing alternative to the status quo? The PPWT is the first draft treaty on outer space ever presented at the UN Conference on Disarmament, which is the quintessential international forum for addressing multilateral disarmament agreements. In fact, the PPWT builds upon elements contained in a 2002 Working Paper presented at the CD by a group of countries that also included Russia and China. Technically speaking, though, the PPWT Treaty focuses not on disarmament but prevention, as outer space is currently considered to be weapons-free and, thus, there is nothing to disarm. Still, the CD seems to be the obvious repository for such a proposal and most member states have welcomed its introduction.

Specifically, as implied in the name of the treaty, the PPWT seeks to ban two different yet interrelated conducts:

the placement of weapons in outer space and

the threat or use of force against outer space objects.

The first initiative sensibly eliminates the fundamental prerequisite for the actual utilization of space weapons: their placement in space. The PPWT treaty defines weapon in outer space in a thorough and comprehensive manner as:

Any device placed in outer space, based on any physical principle, which has been specially produced or converted to destroy, damage, or disrupt the normal functioning of objects in outer space, on the Earth or in the Earth’s atmosphere, or to eliminate a population or components of the biosphere which are important to human existence or to inflict damage on them. (Article 1C)

Clearly, if the Treaty enters into force, such a broad definition would contribute decisively to the goals of PAROS and preventing space from becoming an arena of military confrontation. Notably, it encompasses weapons placed in space that can be used not only against other space objects, but also against Earth-based objects. Thus, it seems apparent that the framers of the PPWT strove to minimize the room for ambiguity and interpretation with regard to the conditions under which a device in space can be considered a weapon. Again, a weapon in space need not be used against an adversary for there to be a violation of the treaty, as its mere placement in space would be considered a breach of the treaty.

Similarly, the second focal point of this treaty, against the threat or use of force against outer space objects, provides a comprehensive ban on any aggressive action against objects in space, defined as:

Any hostile actions against outer space objects including, inter alia, actions aimed at destroying them, damaging them, temporarily or permanently disrupting their normal functioning or deliberately changing their orbit parameters or the threat of such actions. (Article 1E)

#### [2nd plank] International property regime for mining solves war and every single “unilateral” or “unregulated” bad warrant. Their ev.

1AC MacWhorter 16 [Kevin, J.D from William and Mary College and Contributor to the William & Mary Environmental Law and Policy Review, “Sustainable Mining: Incentivizing Asteroid Mining in the Name of Environmentalism”, *William & Mary Environmental Law and Policy Review,* 2016, <https://scholarship.law.wm.edu/cgi/viewcontent.cgi?article=1653&context=wmelpr>] brett

Specifically, it will be vital for countries to enter into some sort of international agreement. One option is to create an agreement similar to UNCLOS, which would regulate how individual states and their citizens interact with resources mined from space.217 Such an agreement should recognize not only the property rights of the extracting commercial entities but also the rights of non-spacefaring countries to benefit from the minerals as well. This might include the creation of an international body, much like the ISA, that will ensure that the interests of all nations are maintained by distributing funds and technology to less wealthy or non-spacefaring nations. The U.S. would do well to help create and ratify such an agreement— something they have failed to do with UNCLOS. If the U.S. and other countries are uneasy about entering into such a restrictive agreement, they might also consider an international regulatory body and scheme much like the one used for satellites. The International Telecommunications Union (ITU) is a United Nations agency that, among other services, provides the international community with uniform satellite orbit oversight and regulatory guidance.218 Currently, 193 countries follow the ITU regulations and utilize their services, which have been likened to domain name registration.219 In the same way, spacefaring countries could form an international body that helps create and maintain a uniform space-mining legal framework.220 Without some sort of international framework as described above, the U.S. and other space-mining countries leave themselves open to great conflict and will be required to patch together a multitude of treaties between themselves as problems inevitably arise.221 V. CONCLUSION The idea of mining resources from celestial bodies is something that has always been relegated to video games and sci-fi movies. But as technology continues to progress at an exponential rate, such mining is starting to come within the realm of possibility. A number of companies are currently creating prospecting technologies that will allow them to determine exactly what an individual asteroid holds. They hope to eventually harvest these resources and sell them for lucrative profits. Fortunately for these companies, the current legal regime governing property rights to space resources is undergoing rapid change at the national level. The U.S. recently passed the Space Resource Exploration and Utilization Act of 2015, which explicitly entitles U.S. citizens to property rights over any space resources they obtain. This is certain to induce confidence in U.S. investors. The situation at the international level is different. Current international space agreements are vague, lacking in consensus, and provide little precedent for ownership of space resources. This has led the international community to move in the direction of creating a better regulatory framework, but this movement is still in discussion stages and is likely to take a while to come to fruition.

#### [3rd plank] Monitoring solves astroterror. Their evidence concludes this solves and avoids the link to the mining DA.

---this is literally the part of the astroterror article where they recommend policy responses.

1AC Drmola and Mareš 15 [Jakub Drmola is a PhD student and Miroslav Mareš professor, at the Divison of Security and Strategic Studies, Masaryk University, Czech Republic, "Revisiting the deflection dilemma", *Astronomy & Geophysics*, Volume 56, Issue 5, October 2015, Pages 5.15–5.18, <https://academic.oup.com/astrogeo/article/56/5/5.15/235650>] brett

Policy implications

Considering these possible future dangers, it seems prudent to consider what to do about them sooner rather than later. The most obvious “solution” would be a blanket ban on the development of any technology that might lead to artificially inflected asteroids crashing into the Earth. However, such a ban would be incompatible with the dream of increased presence of humans in the solar system. It would stymie both scientific exploration and economic development here on Earth, which is increasingly dependent on precious metals and space-based technologies. Furthermore, this approach would leave us more vulnerable to natural impacts which, in the long view, seems less than desirable.

Another approach might be similar to the current regime of non-proliferation of nuclear weapons, aiming to support peaceful civilian use of nuclear power while at the same time prohibiting the spread of weapons of mass destruction. The regime mostly works (with caveats, see Wood et al. 2008) because these applications require different infrastructures and fissile materials enriched to different levels of purity. This makes it possible, at least in principle, to tell apart operations meant for the production of electricity and those designed to create weapons. Unfortunately, the difference between legitimate and hostile trajectory modification would lie only in the acceleration imparted on the asteroid and not in the technical means to do it. As the spacecraft launched with the intent to cause impact with the Earth might be identical to those sent off to retrieve resources, telling them apart would be nearly impossible, until it was too late. And this approach makes no difference to the chances of an industrial accident.

If monitoring equipment on Earth is unhelpful, the focus changes to space. In other words, all asteroid movement missions should be constantly monitored. For an attacker, it would make most sense to delay the final course adjustment for as long as possible in order to give the least warning and make the timeframe for reaction as short as possible. So an asteroid might head towards a safe orbit fit for resource extraction for most of its altered flight time, but be further accelerated at the last possible moment onto an impact trajectory, perhaps mere days before it hits a major city.

Our current programmes cataloguing NEOs (such as CSS or Pan-STARRS), which look for new, previously unknown objects, are not ideally suited for the task of constantly tracking a number of different, already known asteroids. New instruments would be needed to track them in order to immediately detect any hazardous inflection, whether intentional or accidental. Once such a detection is made, emergency measures to evacuate the population or, preferably, to “re-deflect” the incoming object can be executed right away, regardless of the cause. Accidents and hostilities could be treated the same way and countered by the same system (initially, at least). Such a system would be more akin to an air traffic control than a non-proliferation regulation, offering security through vigilance, rather than absence. Additionally, development of a system able to deflect incoming objects at relatively short notice would be beneficial in case of an impending natural impact.

## Case

### AT: Space Wars

#### Alt cause -- 1AC ev says space militarization is happening now AND the 1st plank solves.

Funnell 18 – Anthony, Writer for Future Tense News Citing Dean of Law at University of Adelaide, “War in space 'inevitable' because there's so much money to be made, expert warns”, ABC News, 8/23/2018, <https://www.abc.net.au/news/2018-08-24/conflict-in-space-is-inevitable-expert-warns/10146314> brett

Associate Professor Oduntan believes the US and other countries may be violating international law by developing weapons for space, and by encouraging the possibility of commercial asteroid mining.

He says both the Outer Space Treaty of 1967 and the Moon Agreement of 1979 were designed to prevent the "unilateral and unbridled commercial exploitation of outer-space resources".

But, he acknowledges that while the United States is a signatory to the 1967 Treaty, it has never ratified the Moon Agreement.

For more than a decade now, the UN-aligned Conference on Disarmament has been discussing a possible update or accompaniment to the 1967 Outer Space Treaty, a new multilateral agreement.

As part of those ongoing negotiations, both the Russians and the Chinese have proposed an agreement called the PPWT, essentially a treaty that would ban the placement of military weapons in outer space.

The treaty negotiations have repeatedly been criticised by the US.

Dr Oduntan believes such an agreement could be effective if the United States was persuaded to come onboard.

#### No space war—interdependence checks.

---having tons of private entities in space reduces the risk for conflict.

Bragg et al 18—(principle research scientist at NSI, Inc. Lecturer in polisci @ Texas A&M). , July 2018.. Allison Astorino-Courtois. Robert Elder. Belinda Bragg. “Contested Space Operations, Space Defense, Deterrence, and Warfighting: Summary Findings and Integration Report,” NSI, <https://nsiteam.com/social/wp-content/uploads/2018/11/Space-SMA-Integration-Report-Space-FINAL.pdf>

Everyone needs space While the US may be relatively more dependent on space for national security than are other states, it is far from alone in relying on space. Nuclear armed states are dependent on space for important command and control functions, and major powers are increasingly using space for battlefield situational awareness and communications. China and Russia were identified as having significant (and fairly equal) levels of strategic risk in space (ViTTa Q16), although their regional security priorities and (to date) less spacedependent economies place them at an advantage to the US. They may, therefore, see the strategic risk of conflict is space as lower than does the US. Still, space capabilities remain a source of economic expansion and national pride for both, and their calculations of the cost of conflict involving space may include consideration of these factors. Even now, there is a general consensus that the US and other actors have more to gain from space than they have from the loss of space-based capabilities (ViTTa Q3). This suggests that, although the US is more vulnerable in the space domain than are other states, the likelihood that aggressive action against an adversary’s space assets would be reciprocated may provide a degree of security. It also creates another incentive for actors to use diplomacy and international law to reduce risk and increase transparency in the space domain.

#### The fear of damaging their own infrastructure ensures states moderate themselves.

Bowen 18 [Bleddyn, Lecturer in International Relations at the University of Leicester; ELN; 20 Februrary 2018; “The Art of Space Deterrence,” <https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/>] brett

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.

### AT: Astroterror

#### They miscut Drmola -- that’s our CP. It concludes a blanket ban is NOT the solution to solve asteroid terror risks.

#### No extinction -- if the asteroids are small enough to bring into earth orbit, they’re small enough to deflect back away once they are close enough.

#### Redirection solves

Andrews 19 (Robin George, doctor of experimental volcanology-turned-science journalist, “If We Blow Up an Asteroid, It Might Put Itself Back Together,” 3-8, <https://www.nytimes.com/2019/03/08/science/asteroids-nuclear-weapons.html>)

NASA’s Planetary Defense Coordination Office, which keeps an eye on asteroids and comets that will one day pass close to Earth, instead suggests changing a space rock’s trajectory by giving it a small nudge well in advance of reaching our world. NASA and others aim to test this strategy in 2022 with the Double Asteroid Redirection Test, in which a spacecraft will deliberately crash into the smaller member of a binary asteroid system in an attempt to change its orbit around the larger body.

### AT: Russia

#### No conflicts -- won’t run out of asteroids to mine.

Wojciechowski et al. 18 [Brittany\*; November 2018; Wichita State University PhD student in aerospace engineering; Lucas Webb\*\*, Aubrey Koonce\*\*, Molly Williams\*\*, Wichita State University; European Space Policy Institute; “The Need for Strict Regulation of Asteroid Mining,” <https://espi.or.at/publications/voices-from-the-space-community/category/3-voices-from-the-space-community>] brett

Many people may be concerned that there are not enough mining candidates to meet current and anticipated resource demands. However, there is an almost inexhaustible amount of asteroids in our solar system. Nearly 19,000 near-Earth asteroids have already been identified by NASA JPL. 8 John Lewis, a professor at the University of Arizona in the Lunar and Planetary laboratory says that, “The near-Earth asteroid population could easily support 10 to 40 times the population of Earth, with all the necessary resources to do that”.9 Beyond nearEarth asteroids, the Main Belt asteroids number in the hundreds of millions, potentially worth one billion dollars for every person on Earth.10

### AT: Space Coop

#### Space cooperation will not moderate behavior

Sterner 15 (Eric Sterner, Fellow, George C. Marshall Institute, “China, Talk and Cooperation in Space,” SPACE NEWS, 8—6—15, <https://spacenews.com/op-ed-china-talk-and-cooperation-in-space/>, accessed 5-18-19)

How might cooperation with China benefit the United States? Some hold that cooperation in space helps promote cooperation on Earth. Writing in SpaceNews in 2013, Michael Krepon argued “The more they cooperate in space, the less likely it is that their competition on Earth will result in military confrontation. The reverse is also true.” That sentiment is widespread and flows from the nobility of exploration. If only it were so. Unfortunately, a country’s space behavior appears to have little affect on its terrestrial actions. Russia’s multidecadal human spaceflight partnership with the United States did not prevent it from invading and destabilizing Ukraine when it moved toward a closer relationship with the European Union, many of whose members are Russian partners in the International Space Station. Space cooperation has not, and will not, prevent the continued worsening of the security environment in Europe, which flows from Russian behavior on Earth, not in space. Space cooperation with China is similarly unlikely to moderate its behavior. Tensions in Asia derive from China’s insistence on pressing unlawful territorial claims in the Pacific, most recently by transforming disputed coral reefs into would-be military bases. Ironically, civilian space technology has proved critical in documenting these aggressive moves. To further demonstrate the civil space cooperation does not promote cooperation on Earth, we need look no further than recent history. The NASA administrator’s visit to China in the fall of 2014 nearly coincided with China’s hacking of NOAA, with whom Beijing has a “partnership” in studying climate change. Military confrontation flows from the interaction of hard power in pursuit of competing national interests. Space cooperation falls into the realm of soft power. It has value in strengthening relationships among like-minded states with similar interests. China’s aggressiveness toward its neighbors, its human rights record and its cyberattacks on the United States strongly demonstrate that it and the United States are not of like minds. This is not the result of insufficient space cooperation, but of divergent national interests. The United States is a status quo power; China is not.

#### Space cooperation does not spillover to other areas

**Pollpeter et al 15** (Kevin Pollpeter – research scientist @ CNA China Studies Division, internationally recognized expert on China's space program, M.A. in international policy studies from the Monterey Institute of International Studies. Eric Anderson – one of the leading entrepreneurs in the space industry, co-founder of Space Adventures and current Chairperson, NASA consultant/researcher, B.S. in aerospace engineering from the University of Virginia. Jordan Wilson – MA in International Affairs from the UC San Diego School of Global Policy and Strategy. Policy Analyst @ the U.S.-China Economic and Security Review Commission. Fan Yang – M.Sc. in Space Studies from International Space University, M.Sc. in Mechanical & Aerospace Engineering from the Illinois Institute of Technology, Aerospace Engineer @ NASA. <KEN> “China Dream, Space Dream China’s Progress in Space Technologies and Implications for the United States,” U.S.-China Economic and Security Review Commission. March 2, 2015. DOA: 7/21/19. <https://www.uscc.gov/sites/default/files/Research/China%20Dream%20Space%20Dream_Report.pdf>)

The importance of China’s space diplomacy should not be overstated, however. Relations in space do not drive relations on Earth. International cooperatio)n on space activities usually follows progress in the overall relationship and is more of an indicator of the state of a relationship than a critical component. Although China’s increasing space power does play a role in advancing its diplomatic interests, there is no evidence that it has directly produced tangible political benefits in other areas besides space.632 As its space power increases this may change. China, for example, could have more of a say in international technical organizations such as the International Telecommunications Union over rules governing satellites and satellite frequency issues, but as yet this is unrealized.

### 1NC---Sino/Russia Good

#### No impact to Sino-Russia coop.

Dr. James Jay Carafano 19, PhD from Georgetown University, Master of Arts Degree in Strategy from the U.S. Army War College, Adjunct Professor at Georgetown University, Former Director of Military Studies at the Army’s Center of Military History, Vice President of the Kathryn and Shelby Cullom Davis Institute for National Security at the Heritage Foundation, “Why the China-Russia Alliance Won't Last”, The National Interest, 8/5/2019, https://nationalinterest.org/feature/why-china-russia-alliance-wont-last-71556

So, now everybody wants to be Bismarck. They see themselves shaping history by artfully moving big pieces on the geostrategic chessboard. And one gambit they just can’t resist is moving to snip the growing bonds of Sino-Russian cooperation.

My advice to them: Just stop.

Fears of an allied China and Russia running amok around the world are overblown. Indeed, there is so much friction between these “friends,” any attempt to team up would likely give both countries heat rash.

Siren’s Cat Call

Here’s the lame narrative that’s animating the Bismarck wannabes: The United States is pushing back against Moscow and pressing Beijing. This is driving Moscow and Beijing closer together. Beijing and Moscow will then gang-up on the United States. To prevent this, the United States should make nice with Moscow (undermining the incipient Sino-Russian détente) and then focus on beating back against China.

Yes, China and Russia are going to work together to some degree. They have important things in common. For example, both are unaccountable authoritarian regimes that share the Eurasian continent. Other indicators of compatibility: they like doing business with each other, and both like to make up their own rules. Heck, they don’t even have to pretend the liberal world order is a speed-bump in their joint ventures. Both happily engage with the world’s most odious regimes, from Syria to Venezuela. And, of course, neither has any compunction about playing dirty when it serves their interests.

They already play off of each other to frustrate foreign-policy initiatives from Washington. For example, if the United States pressures Russia to vote a certain way on a measure before the UN Security Council, Russia will often don the white hat and vote as we desire, knowing that Beijing will veto the measure for them. Similarly, if the United States leans on Beijing stop giving North Korea some form of aid and comfort, Beijing can go along with the request, knowing that Moscow will pick up the baton for them.

What the neo-Bismarcks need to ask themselves is: Why would Russia or China ever consider giving up these practices? Why would they make the ongoing great power competition easier for the United States? That makes no sense. That is not in their self-interest.

Any notion that the United States could somehow seduce Russian president Vladimir Putin from playing house with Beijing is fanciful. Putin doesn’t do something for nothing; his price would be quite high. He could demand a free hand in Ukraine, or lifting sanctions, or squelching opposition to Nordstream II, or giving Russia free rein in the Middle East. Any of these “deals” would greatly compromise American interests. Why would we do that? And what, exactly, is Putin going to deliver in return? What leverage does Russia have on Beijing? The answer is not near enough to justify any of these concessions.

On the other hand, what leverage would a Russia-China alliance have on the United States? They wouldn’t jointly threaten Washington with military action. A central element of both their strategies is that they want to win against the United States “without fighting.”

Moscow might be happy if the United States got distracted in a military mix-up with China. Conversely, Beijing could okay with the Americans have an armed confrontation with the Russians. But, neither of them will be volunteering to go first anytime soon.

Even if they linked arms to threaten the United States in tandem, the pain would not be worth the gain. As long as America maintains a credible global and strategic deterrent, a Sino-Russian military one-two punch is pretty much checkmated. Peace through strength really works.

If direct military confrontation is out of bounds, then what can Beijing and Moscow do using economic, political, and diplomatic power or tools of hybrid warfare? The answer to that question is easy: exactly what they are already doing.

We have plenty of evidence of on-going political warfare aimed at the United States, its friends, allies, and interests. Some of these activities are conducted in tandem; some are instances of copy-catism; and some are independent and original.

The political warfare takes many forms—ranging from corrosive economic behavior to aggressive diplomacy to military expansionism and more.

All these malicious efforts are a problem. What they don’t add up to is an existential threat to vital U.S. interests. In other words, we can handle this without sucking up to Putin and undermining our own interests. In fact, we already have a national-security strategy that adequately addresses these concerns.

One more thing inhibiting a Sino-Russian hookup. Russian and Chinese power is largely asymmetrical. They have very different strengths and weaknesses. In coordinating their malicious activities against the United States, they don’t line out very well. China, for example, can’t really do anything substantive to help Russia in Syria. Putin doesn’t have much to offer in the South China Seas or in brokering a U.S.-China trade agreement.

There are also limits to the Sino-Russia era of good feelings. Other than trying to take America down a notch, their global goals are not well aligned. Indeed, the more they try to cooperate, the more their disparate interests will grate on the relationship.

For example, China is meddling more in Central Asia and the Arctic—spaces where Russia was dominant. Moscow has to ask itself: Why is Beijing elbowing in? There is an argument that rather than looking for a strategic partnership, China is just biding its time till Russia implodes, and Beijing steps in and sweeps up the choice pieces.

And, as much as Putin likes to tweak Trump about Moscow’s ties with Beijing, it is becoming more apparent to Washington that Russia is ever more the junior partner. Can Putin really continue to play Robin to a Chinese Batman? As for China, they have to ask: What does Robin really bring to the dynamic-duo?

#### Sino-Russian alliance is key to solve NoKo prolif and war.

Choo ’19 (Jaewoo, Professor of Foreign Policy in the Department of Chinese Studies at Kyng Hee University, Korea, “The China-Russia Entente and the Korean Peninsula”, the National Bureau of Asian Research, <https://www.nbr.org/wp-content/uploads/pdfs/publications/sr78_china_russia_entente_march2019.pdf>)

Beijing sees rapprochement between the United States and North Korea as an opportunity to advance its interests on both the Indochina Peninsula and Taiwan. Previously critical and non-negotiable interests are now expendable and negotiable. At the first summit in Singapore, Trump agreed to suspend all joint military exercises with South Korea due to his distrust in the efficacy of extended deterrence. He is also reportedly contemplating the withdrawal of U.S. forces from South Korea because of economic reasons.11 However coincidental it may be, Trump’s plan offers China an opportunity to pursue its long-sought goal of neutralization of the Korean Peninsula through a perpetual peace settlement facilitated by the complete withdrawal of U.S. forces and the dissolution of the U.S.-ROK alliance. At this critical juncture, China needs Russia’s political and diplomatic support more than ever. Since its participation in the six-party talks, Russia has been accommodating of China’s efforts to work toward North Korea’s denuclearization. China needs Russia’s continued support for three reasons. First, their cooperation is needed to press North Korea to denuclearize. Second, policy coordination with Russia is vital for not only sustaining sanctions on North Korea but also keeping the country from collapsing. Third, Russia’s political support is critical to the realization of both a perpetual peace settlement founded on a peace treaty and the neutralization of the peninsula. Hence, it would be a mistake to view cooperation between China and Russia from any rationale other than a geopolitical, geoeconomic, and geostrategic one. Their cooperative relationship is not bound or driven by ideology. Instead, their interests converge from a shared outlook on world affairs and common concerns about the governance structure and practices of the current U.S.-led liberal international order. At the regional level, the two countries’ interests converge for the same reasons. At the national level, since 2000, Russia has worked to regain the influence and status in Korean affairs that it lost when it adopted a “two-Koreas policy” in the late 1980s and subsequently as a consequence of the first nuclear crisis in 1993.12 At the time, post-Soviet Russia was struggling to establish a national identity that could fit its geographic stretch from Europe to Asia. The country sought to restore a balance and independence to its foreign policy that had been skewed toward the West. This pursuit of a balanced foreign policy was facilitated by NATO’s eastward expansion. Amid these external developments, the outbreak of the second North Korean nuclear crisis in 2003 offered an opportunity for Russia to re-establish its national identity as an eastern power. Ironically, it was at North Korea’s invitation that Russia joined the six-party talks.13 Beijing was cognizant of Moscow’s foreign policy objectives and thus undertook a proactive approach to induce its cooperation in order to counter potential collective pressure from the United States and its allies. In particular, China’s embrace of a security partnership with Russia followed from its recognition of Russia’s aforementioned geopolitical desires and dissatisfaction with the U.S.-led world order and governance. This partnership was heightened by both countries’ concerns about the prospective consequences of the U.S. rebalancing strategy toward Asia under the Obama administration. As a result, Russia’s and China’s relationships with the United States will likely continue to be characterized by mistrust, misperception, and misunderstanding, which could cause a security dilemma to arise.

#### Goes nuclear.

Ward 17 (Alex, associate director of the Atlantic Council's Brent Scowcroft Center on International Security where he works on US foreign policy, national security strategy, and military affairs, “The North Korean military threat to America and its allies, explained,” 4/19, <http://www.vox.com/world/2017/4/19/15355494/north-korea-nuclear-threat-missiles-weapons>)

First, and most critically, North Korea has nuclear weapons and ballistic missiles that when reliably combined could strike US allies in the region, like South Korea and Japan, where US troops are stationed. Thankfully, it still has some work to do before those nuclear-tipped missiles could reach American territory. Second, North Korea has a vast array of artillery — that is, large guns usually used in land warfare — that could be used to attack South Korea. It also has a substantial chemical weapons stockpile, as well as elite special operations forces that could prove challenging for South Korea’s own forces to handle. Finally, if North Korea does decide to use any of those weapons against its enemies, the aftereffects would pose their own significant, worldwide problems. Let’s dig deeper. North Korea’s nuclear weapons and ballistic missiles programs This is the most obvious threat, but probably the most complicated. Last year, Kim told other North Korean leaders that his country would conduct a nuclear strike if it was threatened by “invasive hostile forces with nuclear weapons.” It’s a pretty vague intimidation — nothing new when it comes to the North Korean leadership — but the implication is clear: If North Korea feels like its sovereignty or an important national interest is threatened, it will seriously consider using a nuclear weapon to respond. To do that successfully, North Korea needs two things: a functioning nuclear weapon, and a way to deliver that weapon to a specific location. North Korea has both — but caveats apply. There is currently no evidence that North Korea can place a nuclear warhead on an intercontinental ballistic missile (ICBM) and reliably hit any part of the US mainland or its territories. So when Sen. Dan Sullivan (R-AK), a member of the Senate Armed Services Committee, claims Kim “can press a button and hit Chicago,” he’s jumping the gun. That said, North Korea has the potential to put a nuke on a medium-range missile that could reach South Korea and Japan — two allies that host US military installations. Simply put, if North Korea wanted to strike South Korea and Japan with a nuclear weapon, it could likely do so. Making matters worse, any nuclear strike on those countries would put American troops stationed there directly in harm’s way. This is partially why the United States has decided to deploy the Terminal High Altitude Area Defense (THAAD) system in South Korea to defend against certain missile strikes and why America is conducting missile interception tests with Japan. And the situation is likely to get worse. Jeffrey Lewis, director of the East Asia nonproliferation program at the Center for Nonproliferation Studies, told me in an interview that he thinks North Korea will have intermediate- to long-range missiles capable of carrying a nuke to American soil ready for launch in about five years. That will soon put Guam, and potentially Hawaii and other parts of the United States, within North Korea’s nuclear reach. Let’s just stop for a second to let that sink in: Experts believe that in about five years, North Korea will be able to hit US territory with a nuclear weapon. And they think it can probably already hit Japan, South Korea, and US troops stationed there with a nuke right now. That is the core of what we mean when we talk about “the North Korean threat.” It’s why this crisis feels so immediate, and why it seems to have been getting more and more frightening as time goes by. It’s also because North Korea has dramatically ramped up the pace of its missile testing in recent years: In 2017 alone, the country conducted three successful missile tests — count ’em: one, two, three — and suffered two setbacks, including the one over the weekend. That’s on top of the five nuclear tests it’s conducted since October 2006, as the chart from the BBC below shows. The country currently claims to be “primed and ready” to carry out a sixth nuclear test any day now. BBC Despite stiff competition, Kim continues to vie for the title of most bombastic and overly confident world leader. He boasts his country can “wipe out Manhattan” if he so orders. He’s also threatened to reduce the United States “to ashes” if it strikes North Korea first. For now, these are laughably melodramatic statements, but if North Korea’s nuclear and missiles programs continue to improve at the same pace, those proclamations will quickly stop seeming like empty boasts. Many important questions remain. For one, the size of North Korea’s nuclear arsenal is a mystery, although estimates put it somewhere between 10 and 16 weapons. Second, it’s unclear if Pyongyang has what is known as a “second-strike capability” — that is, if North Korea were struck by a nuke, could it still retaliate with a powerful nuclear strike of its own? The jury is still out, but it is definitely trying to secure that capability. This matters a lot: If it has that ability, the stakes for any country thinking about attacking the North become exponentially higher, because they would then be susceptible to being hit by a North Korean nuke in response. In other words, it makes North Korea more dangerous and therefore gives them more leverage. Finally, Kim claims he has a hydrogen bomb, a far more powerful type of nuclear weapon than the run-of-the-mill atomic bomb we know he already has. His assertion has not been proven — he more likely has a boosted atom bomb, which uses a radioactive form of hydrogen that makes it more powerful than a normal atom bomb but not nearly as powerful as a true hydrogen bomb. But if he does have a true hydrogen bomb, North Korea’s enemies have an even bigger threat on their hands than previously thought. Artillery, chemical weapons, and special forces While the nuclear and missile programs get all the attention, a seriously underappreciated threat comes from North Korea’s arsenal of conventional weapons, including the world’s largest artillery force. A third danger comes from the country’s elite special operations forces that could magnify the impact of a North Korean strike on South Korea. South Korea’s capital city, Seoul, is a so-called “megacity” with a whopping 25.6 million residents living in the greater metropolitan area. It also happens to be within direct firing range of thousands of pieces of North Korean artillery already lined up along the border, also known as the demilitarized zone. Around 70 percent of North Korea’s ground forces are within 90 miles of the DMZ, presumably ready to move south at a moment’s notice. Simulations of a large-scale artillery fight between the North and South produce pretty bleak results. One war game convened by the Atlantic back in 2005 predicted that a North Korean attack would kill 100,000 people in Seoul in the first few days alone. Others put the estimate even higher. A war game mentioned by the National Interest predicted Seoul could “be hit by over half-a-million shells in under an hour.” Those results don’t bode well for one of Washington’s closest allies, or for the tens of millions of people living in Seoul. And that’s not all. A report from Stratfor, a private intelligence analysis firm, found that a large-scale North Korean artillery attack would likely mean that the northern half of Seoul would get hit the most. Depending on where North Korea placed some of its rocket launchers, southern portions of Seoul — including the Gangnam District of “Gangnam Style” fame — would also be within range. The Stratfor report further notes than just “a single volley” of North Korean artillery could deliver “over 350 metric tons of explosives” into greater Seoul, “roughly the same amount of ordnance dropped by 11 B-52 bombers.” As if that were not enough, North Korea has a robust chemical weapons program. South Korea’s Ministry of Defense estimates that its northern neighbor has between 2,500 and 5,000 metric tons of chemical weapons, including sarin and VX nerve agents. (Sarin is thought to be the chemical agent used in the Assad’s regime’s recent attack in Syria, which killed 72 people and left children gasping for breath as they choked on the poisonous gas.) Should North Korea attack, it might use chemical weapons early on in South Korea’s urban areas to increase the death toll. At the same time, conventional munitions could rain down on the South. After that barrage, North Korea’s 200,000-strong special operations forces should have an easier time arriving via tunnels, mini-submarines, or Russian biplanes. Surely Pyongyang would find a way to employ its growing cyber capabilities, too, because why not? Granted, North Korea is not expected to win a full-blown war with South Korea, should that come to pass. For one, America has the ability to stop a North Korean missile launch before it even happens with cyber capabilities. But even if a launch did take place, the THAAD system being deployed in South Korea should be able to take it down. If that missed, Aegis ships in the Pacific could shoot the missile; and if that failed, Patriot batteries could also stop the flight. And if all that failed … well, you know. The bottom line is that there are lot of defenses in place designed to stop North Korean missiles, but nothing is perfect. North Korea has far more troops than South Korea (1.19 million versus 655,000), but should a conventional fight break out, US and South Korean air power would help balance the scales. But, again, nothing is guaranteed. Either way, North Korea could cause a lot of damage and harm a lot of countries — and people — as it goes down. The aftermath of a conflict with North Korea “would be fundamentally disruptive” to the region — and the world If there is a conflict where North Korea deploys many of its deadly weapons, what happens when the dust settles? Robert Manning, a Koreas expert at the Atlantic Council, said in an interview that a North Korean attack on South Korea or any other of its neighbors “would be fundamentally disruptive” to the region and the world. He’s not kidding. Marine Col. Jeff Vandaveer, who spent a year serving in Asia and was a former faculty member at the Marine Command and Staff College, has thought a lot about the potential regional and global effects of a war with North Korea. In an interview, he told me that such a conflict could lead to a big slump in the global economy, cause humanitarian suffering, and pit great powers against one another. The economic consequences of Japan and/or South Korea, respectively the third and 11th biggest world economies, reeling from a big attack would impact the world’s financial future. The humanitarian consequences would also be dire, Vandaveer said. Millions of hungry, displaced people would be trapped on a small peninsula during a brutal war. Meanwhile, tensions would rise as great powers like China, Russia, and the United States would likely be drawn further into the fray. That’s already happening, in a way, as Russian and Chinese ships tail America’s carrier strike group in the region. They both call for “restraint” in these tense times between America and North Korea.