### 1NC – OFF

#### Interpretation-- Debaters must only regulate or prohibit the appropriation of outer space by private entities. To clarify, they cannot regulate or prohibit the impacts of appropriation of outer space.

#### Two violations:

#### 1] they defend a subset of appropriation based on its impact [space debris]

#### 2] Appropriation is a term of art that doesn’t mean occupation or usage. Satellites and objects in geosynchronous orbit do not constitute appropriation – it’s not permanent nor stationary

Gorove 84 Stephen Gorove, Major Legal Issues Arising from the Use of the Geostationary Orbit, 5 MICH. J. INT'L L. 3 (1984). Available at: <https://repository.law.umich.edu/mjil/vol5/iss1/1> //RD Debatedrills

Crucial to a proper analysis of this issue is an understanding of the concept of "appropriation." The term "appropriation" in law is used most frequently to signify "the taking of property for one's own or exclusive use with a sense of permanence." 12 The word" thus indicates something more than just casual use. The question then becomes whether the continued exclusive occupation by a geostationary satellite of the same physical area is a violation of the ban on national appropriation. While a state may certainly exercise exclusive control over a traditional object, such as a ship, or an aircraft, or a part of airspace, it is not clear that a satellite in geostationary orbit would be able to maintain its exact position and occupy the same area over a period of time. 13 Even if a position could be accurately maintained, and thus possibly constitute an "appropriation" within the meaning of article II, the satellite would have to be kept in that orbit with a "sense of permanence" and not on a temporary basis. It has been suggested that the keeping of a solar power satellite in geostationary orbit for a period of thirty years would not constitute appropriation. 14 In point of fact, thirty years would probably satisfy the "sense of permanence" requirement, unless the geostationary orbit were considered a natural resource as characterized by the International Telecommunication Convention of 1973 (ITC) 15 and as claimed by the equatorial countries. Authority exists to support the view that the ban on national appropriation of outer space does not relate to resources. 16 In view of this and the additional fact that solar energy is an inexhaustible and unlimited resource, its utilization for transmission to earth by satellites does not appear to fall under the prohibition of article II of the 1967 Treaty.

#### Appropriation of outer space shouldn’t be determined by one legal author saying your aff is topical – rather through the past actions of space-faring actors and what has been allowed and rejected

**Trapp 13** (TIMOTHY JUSTIN TRAPP, JD Candidate @ UIUC Law, ‘13, TAKING UP SPACE BY ANY OTHER MEANS: COMING TO TERMS WITH THE NONAPPROPRIATION ARTICLE OF THE OUTER SPACE TREATY UNIVERSITY OF ILLINOIS LAW REVIEW [Vol. 2013 No. 4])//DebateDrills RD

As commercial space flight becomes more and more prevalent,153 the question of whether private entities can appropriate property in space becomes very important. Whereas once it took a nation to get into space, it will soon take only a corporation, and scholars have pondered whether these entities will be able to claim property in space.154 Though this seems allowable, since the treaty only prohibits “national appropriation,”155 allowing such appropriation would lead to an absurd result. This is because the only value that lies in recognition of a claim is the ability to have that claim enforced.156 If a nation recognized and enforced such a claim, this enforcement would constitute state action.157 It would serve to exclude members of other nations and would thus serve as a form of national appropriation, even though the nation never attempted to directly appropriate the property.158 Furthermore, the Outer Space Treaty also requires that non-governmental entities must be authorized and monitored by the entities’ home countries to operate in space.159 Since a nation cannot authorize its citizens to act in contradiction to international law, a nation would not be allowed to license a private entity to appropriate property in space.160 While this nonappropriation principle is great for allowing free access to space, thereby encouraging research and development in the field, it makes it difficult to create or police a solution to the space debris problem. A viable solution will have to work without becoming an appropriation. There is, however, very little substantive law on what actually counts as appropriation in the context of space.161 So, the best way to see what is and is not allowed is to look both at the general international law regarding appropriations and to look at the past actions of space actors to see what has been allowed (or at least tolerated) and what has been prohibited or rejected.

#### Standards:

#### 1] Moving Target – they aren’t connected to one advocacy because they can always shift their advocacy; shooting a rocket into space, asteroid and lunar mining, megaconstellations, and more all cause some amount of debris – causes an infinite amount of affs and 1AR reclarification that steals all neg ground

#### 2] Precision o/w - Their model incentivizes arbitrarily doing away with words in the resolution- outer space is a term of the art that requires a specific distinction.

#### Drop the debater – a) they have a 7-6 rebuttal advantage and the 2ar to make args I can’t respond to, b) it deters future abuse and sets a positive norm.

#### Competing interps: a] arbitrary and increases judge intervention b] you can’t be reasonably topical

### 1NC - OFF

#### States ought to:

#### -- Announce that lunar mining by private actors violates the Outer Space Treaty and that this is a settled matter of customary international law

#### -- Announce that this action is taken pursuant to *opinio juris* (the belief that the action is taken pursuant to a legal obligation) and that non-compliant actors are in violation of international law

#### -- Fully comply, not lunar mining in a manner inconsistent with these proclamations

#### Solves the Aff.

[Fabio](https://kluwerlawonline.com/journalarticle/Air+and+Space+Law/33.3/AILA2008021) **Tronchetti 8**. Dr. Fabio Tronchetti works as a Co-Director of the Institute of Space Law and Strategy and as a Zhuoyue Associate Professor at Beihang University, “The Non–Appropriation Principle as a Structural Norm of International Law: A New Way of Interpreting Article II of the Outer Space Treaty,” Air and Space Law, Volume 33, No 3, 2008, <https://kluwerlawonline.com/journalarticle/Air+and+Space+Law/33.3/AILA2008021>, RJP, **DebateDrills**.

–appropriation principle represents the fundamental rule of the space law system. Since the beginning of the space era, it has allowed for the safe and orderly development of space activities. Nowadays, however, the principle is under attack. Some proposals, arguing the need for abolishing it in order to promote commercial use of outer space are undermining its relevance and threatening its role as a guiding principle for present and future space activities. This paper aims at safeguarding the non–appropriative nature of outer space by suggesting a new interpretation of the non–appropriation principle that is based on the view that this principle should be regarded as a customary rule of international law of a special character, namely ‘a structural norm’ of international law.

#### That competes –

#### 1 -- Widespread support for OST overhaul means a new treaty is likely---top military leaders are pushing it.

Theresa **Hitchens 21**. Theresa Hitchens is the Space and Air Force reporter at Breaking Defense. The former Defense News editor was a senior research associate at the University of Maryland’s Center for International and Security Studies at Maryland (CISSM). Before that, she spent six years in Geneva, Switzerland as director of the United Nations Institute for Disarmament Research (UNIDIR). “US Should Push New Space Treaty: Atlantic Council,” Breaking Defense, April 12, 2021, <https://breakingdefense.com/2021/04/us-should-push-new-space-treaty-atlantic-council/>, RJP, **DebateDrills**

WASHINGTON: The US should push hard to overhaul the entire international legal framework for outer space — including replacing the foundational [1967 Outer Space Treaty (OST),](https://breakingdefense.com/tag/outer-space-treaty/) a new report from the Atlantic Council says.

As it moves to do so, the US also should more aggressively court allies with an eye to establishing a “collective security alliance for space” among likeminded countries to “deter aggression” and defend “key resources and access.”

“The 1967 Treaty is dated. It was written, literally, in a different era,” said former Air Force Secretary Deborah Lee James in an Atlantic Council briefing today. “At present it is too broad, and in some cases it’s probably overly specific.”

The year-long study, [“The Future of Security In Space: A Thirty-Years US Strategy”](https://www.atlanticcouncil.org/wp-content/uploads/2021/04/TheFutureofSecurityinSpace.pdf)was co-chaired by James and retired Marine Corps Gen. Hoss Cartwright, former vice chair of the Joint Chiefs of Staff. In essence, it argues that the US needs to lead international efforts to craft a new rules-based regime to govern all space activities — from exploration to commercial ventures to military interactions. As the two argued in a recent [op-ed in Breaking D,](https://breakingdefense.com/2021/03/the-space-rush-new-us-strategy-must-bring-order-regulation/) “Great-power competition among the United States, China, and Russia has launched into outer space without rules governing the game.”

“The international law of space, centered on the 1967 Outer Space Treaty, is outdated and insufficient for a future of space in which economic activity is primary. The international community needs a new foundational space treaty, and the United States should precipitate its negotiation,” the study argues.

James elaborated that the idea would be to craft a more expansive treaty that covers emerging issues like debris mitigation and removal and [commercial extraction of resources](https://breakingdefense.com/tag/space-resource-extraction/) from the Moon and/or asteroids. That said, she stressed that the US should not abandon the OST — which has been signed by 193 nations — unless and until something new is there to replace it.

#### 2 -- Space law is typically treaty-based---Russian and Chinese proposals prove.

Stephanie **Nebehay 8**. Reporter, Reuters, “China, Russia to Offer Treaty to Ban Arms in Space,” Reuters, January 26, 2008, <https://www.reuters.com/article/us-arms-space/china-russia-to-offer-treaty-to-ban-arms-in-space-idUSL2578979020080125>, RJP, **DebateDrills**

GENEVA (Reuters) - China and Russia will submit a joint proposal next month for an international treaty to ban the deployment of weapons in outer space, a senior Russian arms negotiator said on Friday.

Valery Loshchinin, Russia’s ambassador to the United Nations-sponsored Conference on Disarmament, said the draft treaty would be presented to the 65-member forum on February 12.

Russian Foreign Minister Sergei Lavrov is due to address the Geneva forum, which constitutes the world’s main disarmament negotiating body, on that day. Loshchinin gave no details on the proposal which has been circulated to some senior diplomats.

Tensions between Russia and the United States have deepened in recent years over U.S. plans to revive its stalled “Star Wars” program from the 1980s with a new generation of missile defense shields.

Nuclear and other weapons of mass destruction are banned from space under a 1967 international treaty. But Washington’s plans have stirred concerns about non-nuclear arms in space.

#### 3 -- Treaties are the foundation of space law.

Sophie **Goguichvili et. al 21**. Program Associate, the Wilson Center, “The Global Legal Landscape of Space: Who Writes the Rules on the Final Frontier?” The Wilson Center, October 1, 2021, <https://www.wilsoncenter.org/article/global-legal-landscape-space-who-writes-rules-final-frontier>, RJP, **DebateDrills**

As previously mentioned, a series of treaties adopted by the U.N. General Assembly (UNGA) form the foundation of the global space governance system. The first and most significant of these treaties is the “Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space including the Moon and Other Celestial Bodies,” more commonly known as the **Outer Space Treaty**or**OST** for short (1967). The Outer Space Treaty is considered the most comprehensive space treaty and provides the basic framework for international space law, namely: the exploration and use of outer space for peaceful purposes by all States for the benefit of mankind (Art. I); the outlaw of national appropriation or claims of sovereignty of outer space or celestial objects (Art. II); a ban on the placement of weapons of mass destruction in orbit or on celestial bodies (Art. IV); that astronauts should be regarded as the envoys of mankind (Art. V); and that States are required to supervise the activities of their national entities (Art. VI).

#### 4 -- 1AC Shah 20 proves competition: they defend a revision of the OST – no 1AR reclarification or shift because it moots all negative ground

#### We solve better:

#### 1 -- CIL is far superior to treaties for space AND causes follow-on.

Koplow, 9 – Professor of Law, Georgetown University Law Center.

David A. Koplow, “ASAT-isfaction: Customary International Law and the Regulation of Anti-Satellite Weapons,” Michigan Journal of International Law. Volume 30, Summer 2009. <http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1452&context=facpub>

Finally, the Article concludes with some policy recommendations, suggesting mechanisms for the world community to press forward with autonomous efforts to promote stability and security in outer space, even in the face of recalcitrance from the leading space powers. I would certainly support the negotiation and implementation of a comprehensive new treaty to prevent an arms race in outer space, and a carefully drafted, widely accepted accord could accomplish much, well beyond what customary law alone could create. But the treaty process, too, has costs and disadvantages, and the world need not pursue just one of these alternatives in isolation.

If the absence of global consensus currently inhibits agreements that countries could already sign, perhaps the world community can nevertheless get some "satisfaction" via the operation of CIL, constructing a similar (although not completely equivalent) edifice of international regulation of ASATs based simply on what countries do.

#### 2 -- Rollback---treaties can be withdrawn or refused---CIL is durable even in a world of say no

Koplow, 9 – Professor of Law, Georgetown University Law Center.

David A. Koplow, “ASAT-isfaction: Customary International Law and the Regulation of Anti-Satellite Weapons,” Michigan Journal of International Law. Volume 30, Summer 2009. <http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1452&context=facpub>

At the other end of the timeline, a CIL rule would also continue to apply to any State that initially joined a treaty, but later changed its mind and decided to withdraw from it.257 Treaty withdrawals are rare, but the United States' 2002 pullout from the 1972 Anti-Ballistic Missile Treaty and North Korea's 2003 withdrawal from the 1968 Non-Proliferation Treaty suggest that this is no longer a trivial consideration. Similarly, if a treaty party exercises its right to "suspend" temporarily the operation of a treaty (as, for example, in response to another party's material breach of the obligations), any underlying CIL obligations could still be applicable.

#### 3 -- Scope---CIL doesn’t rely on countries saying yes

Koplow, 9 – Professor of Law, Georgetown University Law Center.

David A. Koplow, “ASAT-isfaction: Customary International Law and the Regulation of Anti-Satellite Weapons,” Michigan Journal of International Law. Volume 30, Summer 2009. <http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1452&context=facpub>

D. Customary International Law and Treaties

Although treaties and customary international law norms are of equivalent legal weight, there is one sense in which CIL is even more assertive and far-reaching than the written instruments. That is, once a CIL norm is established (through the above-described arcane objective and subjective criteria), it becomes automatically binding on all States even those that did not participate in the emerging pattern, that may not have been fully cognizant that a trend was developing, and that may not be fully supportive of the rule, if they took the occasion to think about it seriously. In fact, new countries (e.g., former colonies) that were not even in existence at the time a prior CIL norm had emerged are nonetheless bound by it-a new State may have some ability to pick and choose which treaty obligations of its former regime should continue to apply to the new entity, but it is generally deemed to have consented automatically to the entire corpus of CIL that exists on the date of its independence.38

The only exemption from CIL is available to a "persistent objector." That is, a State that publicly and consistently repudiates a newly arising norm of CIL, from the time that it emerges through its effectuation as law, is not bound by it. There are, however, few examples of successful invocation of this exception; it is rare for a State to be sufficiently prescient and conscientious to preserve its autonomy as a new CIL rule advances.'39

In contrast, of course, any State may avoid any treaty obligation simply by deciding not to sign or ratify it. Treaties rarely directly implicate the rights and responsibilities of non-parties, and passivity or inaction therefore results in the absence of legal responsibility. With CIL, on the other hand, the "default position" is reversed.

#### Reasonability- persuasive defense on theory means you ignore it- theory requires abandoning substance to set a norm, which means the benefit of that norm must outweigh voting on theory instead of substance.

### 1NC - OFF

#### The plan requires clarifying international space law---causes strategic bargaining to extract concessions

Alexander William Salter 16, Assistant Professor of Economics, Rawls College of Business, Texas Tech University, "SPACE DEBRIS: A LAW AND ECONOMICS ANALYSIS OF THE ORBITAL COMMONS", 19 STAN. TECH. L. REV. 221 (2016), https://law.stanford.edu/wp-content/uploads/2017/11/19-2-2-salter-final\_0.pdf

V. MITIGATION VS. REMOVAL

Relying on international law to create an environment conducive to space debris removal initially seems promising. The Virginia school of political economy has convincingly shown the importance of political-legal institutions in creating the incentives that determine whether those who act within those institutions behave cooperatively or predatorily.47 In the context of space debris, the role of nation-states, or their space agencies, would be to create an international legal framework that clearly specifies the rules that will govern space debris removal and the interactions in space more generally. The certainty afforded by clear and nondiscriminatory48 rules would enable the parties of the space debris “social contract” to use efficient strategies for coping with space debris. However, this ideal result is, in practice, far from certain. To borrow a concept from Buchanan and Tullock’s framework,49 the costs of amending the rules in the case of international space law are exceptionally high. Although a social contract is beneficial in that it prevents stronger nation-states from imposing their will on weaker nation-states, it also creates incentives for the main spacefaring nations to block reforms that are overall welfare-enhancing but that do not sufficiently or directly benefit the stronger nations.

The 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (more commonly known as the Outer Space Treaty) is the foundation for current international space law.50 All major spacefaring nations are signatories. Article VIII of this treaty is the largest legal barrier to space debris removal efforts. This article stipulates that parties to the treaty retain jurisdiction over objects they launch into space, whether in orbit or on a celestial body such as the Moon. This article means that American organizations, whether private firms or the government, cannot remove pieces of Chinese or Russian debris without the permission of their respective governments. Perhaps contrary to intuition, consent will probably not be easy to secure.

A major difficulty lies in the realization that much debris is valuable scrap material that is already in orbit. A significant fraction of the costs associated with putting spacecraft in orbit comes from escaping Earth’s gravity well. The presence of valuable material already in space can justifiably be claimed as a valuable resource for repairs to current spacecraft and eventual manufacturing in space. As an example, approximately 1,000 tons of aluminum orbit as debris from the upper stages of launch vehicles alone. Launching those materials into orbit could cost between $5 billion and $10 billion and would take several years.51 Another difficulty lies in the fact that no definition of space debris is currently accepted internationally. This could prove problematic for removal efforts, if there is disagreement as to whether a given object is useless space junk, or a potentially useful space asset. Although this ambiguity may appear purely semantic, resolving it does pose some legal difficulties. Doing so would require consensus among the spacefaring nations. The negotiation process for obtaining consent would be costly.

Less obvious, but still important, is the 1972 Convention on International Liability for Damage Caused by Space Objects, normally referred to as the Liability Convention. The Liability Convention expanded on the issue of liability in Article VII of the Outer Space Treaty. Under the Liability Convention, any government “shall be absolutely liable to pay compensation for damage caused by its space objects on the surface of the Earth or to aircraft, and liable for damage due to its faults in space.”52 In other words, if a US party attempts to remove debris and accidentally damages another nation’s space objects, the US government would be liable for damages. More generally, because launching states would bear costs associated with accidents during debris removal, those states may be unwilling to participate in or permit such efforts. In theory, insurance can partly remediate the costs, but that remediation would still make debris removal engagement less appealing.

A global effort to remediate debris would, by necessity, involve the three major spacefaring nations: the United States, Russia, and China.53 However, any effort would also require—at a minimum—a significant clarification and—at most —a complete overhaul of existing space law.54 One cannot assume that parties to the necessary political bargains would limit parleying to space-related issues. Agreements between sovereign nation-states must be self-enforcing.55 To secure consent, various parties to the change in the international legal-institutional framework may bargain strategically and may hold out for unrelated concessions as a way of maximizing private surplus. The costs, especially the decision-making costs, of changing the legal framework to secure a global response to a global commons problem are potentially quite high.

#### Russia will demand concessions over Ukraine – it’s their top priority and violates Ukraine’s sovereignty.

Maynes 1/24 – NPR Moscow correspondent, reporting in Russia for over a decade

Charles Maynes, last updated at time of cutting: 1-24-2022, “4 things Russia wants right now,” *NPR*, https://www.npr.org/2022/01/12/1072413634/russia-nato-ukraine DD

MOSCOW — First U.S. and Russian diplomats faced off in Geneva. Then NATO received a Russian delegation in Brussels. The Organization for Security and Cooperation in Europe sponsored talks in Vienna. And finally, the U.S. and Russian chief diplomats met, again in Geneva, last week.

Russia courted all this attention by massing some 100,000 troops and military equipment near Ukraine, raising fears of a Russian invasion. Analysts read Russia's buildup as an attempt to pressure the U.S. and its European allies into concessions on a series of far-reaching "security guarantees" sought by Moscow.

1. Russia wants a guarantee Ukraine can never join NATO

Russia's main demand is a commitment from NATO to end its further expansion into former Soviet republics — especially Ukraine. Russia wants NATO to rescind a 2008 promise that Ukraine could someday join the defense alliance. Many observers see it as a distant prospect that Ukraine could join NATO because it doesn't meet membership requirements. But Moscow doesn't see it that way. "We don't trust the other side," Russia's chief negotiator, Deputy Foreign Minister Sergei Ryabkov, said after bilateral talks with the U.S. finished. "We need ironclad, waterproof, bulletproof, legally binding guarantees. Not assurances. Not safeguards. Guarantees. With all the words — 'shall, must' — everything that should be put in."

Russia's reasoning: President Vladimir Putin views Ukraine as an extension of what he calls "historical Russia" — a part of the Russian Empire and Soviet Union, and within Moscow's "sphere of influence" today. The threat of Ukraine's westward turn after a street revolution ousted the country's pro-Russian president in 2014 was the driving force behind Russia's annexation of Crimea later that year. Ukraine's desire to join the Western alliance also led to Russia's sponsorship of separatists in the country's eastern Donbas region — in effect sabotaging its path to membership by fueling a civil war.

NATO's counter: The U.S. argues that countries have a right to choose their own alliances and NATO has a long-standing "open door policy" for potential membership. "NATO has never expanded through force or coercion or subversion. It is countries' sovereign choice to choose to come to NATO and say they want to join," Deputy Secretary of State Wendy Sherman said after a meeting between Russian and NATO officials in Brussels earlier this month. Russia's actions are making the idea of NATO membership more appealing to Ukrainians, according to opinion polls. It is unlikely, however, that Ukraine will meet the requirements anytime soon.

#### Concessions on sovereignty spark global allied prolif.

Gawthorpe 14 – teaching fellow at the Defence Academy of the United Kingdom

Andrew Gawthorpe, 3-14-2014, “Could Ukraine Drive Nuclear Proliferation in Asia?” *The Diplomat*, https://thediplomat.com/2014/03/could-ukraine-drive-nuclear-proliferation-in-asia/ DD

Recent events in Eastern Europe raise the issue not only of Russia’s future actions but also the lessons that will be drawn regarding other revisionist states. In East Asia, a China that is nurturing territorial ambitions of its own and has recently become less shy about asserting them will watch to see how the West reacts to Vladimir Putin’s expansionism. So will China’s East Asian neighbors, who fear they may become the next Ukraine.

One of the most potentially disturbing effects of the situation in Ukraine is the possibility it may drive nuclear proliferation. The present crisis in that country could well have been a nuclear nightmare. When the USSR was unraveling in the early 1990s, a sizeable portion of its strategic forces, along with tactical nuclear weapons, were deployed in Ukraine. Had the new Ukrainian government in Kiev taken control of these weapons upon becoming independent, it would have been the third-largest nuclear power in the world. behind only the U.S. and the Russia.

Concerned about nuclear proliferation throughout Europe if new nuclear powers were created by the Soviet Union’s demise, the U.S. pressured Ukraine to denuclearize and to return its nuclear forces to Russia. Basking in a post-independence glow and seeking U.S. support on other issues, Kiev went along. This was the origin of the so-called Budapest Memorandum of 1994, in which Ukraine promised to give up its nuclear weapons in return for Russia, Britain and the U.S. guaranteeing its sovereignty and territorial integrity. With the wholesale invasion of Crimea by Russian forces in recent days, Kiev can be forgiven for asking if the agreement is any longer worth the paper it’s written on.

Since Russia’s occupation of Crimea, a former Ukrainian foreign minister has called for his country to restock its nuclear arsenal and some Western analysts have questioned whether Putin would have acted so boldly if Ukraine still had its nuclear deterrent. The question can be expected to occur to leaders of other countries who are concerned about the territorial ambitions of their neighbors or the sincerity of Western security assurances.

The issue is of particular salience in East Asia, where China has recently been flexing its muscles in a range of territorial disputes. Regional powers such as Japan and Taiwan must be watching America’s unwillingness to forcefully confront a nuclear-armed Russia and wondering how much backbone the exhausted and drained superpower would have if China made similar moves. This is especially the case since the Obama administration’s so-called “pivot” to the Asia-Pacific seems to be much more an excuse for disengaging from the Middle East than it is a real exercise in strengthening the American alliance system in the Asia-Pacific.

Any such moves towards proliferation would be unwise. Acquiring nuclear weapons may appear to provide an effective way for countries worried about their neighbors’ territorial ambitions to deter them, but the truth is not so simple. While nuclear weapons provide an effective deterrent against an all-out attack, they are not necessarily effective in deterring lower-level conflict. Just as it is implausible to imagine that Ukraine would have responded to the appearance of balaclaved soldiers in Crimea with a first strike, so it is equally implausible to imagine any country responding to the Chinese declaration of an Air Defense Identification Zone in the same manner.

Revisionist powers are adept at nibbling away at international norms and agreements slowly and avoiding big, sweeping gestures. Countries responding to such a nibble with nuclear brinksmanship risk making their adversaries look reasonable by comparison, giving nuclear weapons questionable utility in territorial disputes. And if their use is indeed threatened and taken seriously, the result can be a dangerous cycle of escalation.

**<Feel free to insert your preferred prolif impacts>**

#### East Asian prolif breaks deterrence and escalates.

Cimbala 15 – Stephen J., Distinguished Professor of Political Science at Pennsylvania State University Brandywine, “New Nuclear Disorder: Challenges to Deterrence and Strategy” Ashgate Publishing Ltd

Failure to contain proliferation in Pyongyang could spread nuclear fever throughout Asia. Japan and South Korea might seek nuclear weapons and missile defenses. A pentagonal configuration of nuclear powers in the Pacific basin (Russia, China, Japan, and the two Koreas—not including the United States, with its own Pacific interests) could put deterrence at risk and create enormous temptation toward nuclear preemption. Apart from actual use or threat of use. North Korea could exploit the mere existence of an assumed nuclear capability in order to support its coercive diplomacy.1'' A five-sided nuclear competition in the Pacific would be linked, in geopolitical deterrence and proliferation space, to the existing nuclear deterrents of India and Pakistan, and to the emerging nuclear weapons status of Iran. An arc of nuclear instability from Tehran to Tokyo could place US proliferation strategies into the ash heap of history and call for more drastic military options, not excluding preemptive war, defenses and counter-deterrent special operations. In addition, an unrestricted nuclear arms race in Asia would increase the likelihood of accidental or inadvertent nuclear war. It would do so because: (1) some of these states already have histories of protracted conflict; (2) states may have politically unreliable or immature command and control systems, especially during a crisis involving a decision for nuclear first strike or retaliation; unreliable or immature systems might permit a technical malfunction that caused an unintended launch, or a deliberate, but unauthorized, launch by rogue commanders; and (3) faulty intelligence and warning systems might cause one side to misinterpret the other's defensive moves to forestall attack as offensive preparations for attack, thus triggering a mistaken preemption.

### Case

#### Top-level – the aff is ridiculous - only satellites in the LEO are affected by the Kessler syndrome, not every satellite ever

#### No space war miscalc

Bragg et al, July 2018 - \*Dr. Allison Astorino-Courtois, NSI’s Chief Analytics Officer (CAO) and Executive Vice President, PhD in IR @ NYU \*\*Dr. Robert Elder, PhD @ Emory, BA @ Clemson, Assistant prof of History @ Baylor \*\*\*Dr. Belinda Bragg, principle research scientist at NSI, Inc. Lecturer in polisci @ Texas A&M.;“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.

#### Deterrence in space solves even if we’re more vulnerable ---

#### Countries know we value our space assets and are willing to practice brinkmanship or escalate horizontally

Harrison, 9 – Director, Eisenhower Center for Space and Defense Studies Ambassador Roger G. Harrison, “Space Deterrence: The Delicate Balance of Risk,” Space and Defense, Volume 3, No. 1. Summer 2009. <http://www.usafa.edu/app/uploads/Space_and_Defense_3_1.pdf>

There are, however, potential mitigating factors. First, an adversary could not be certain that retaliation would be limited to space. Although the threat of escalation is often portrayed as inhibiting rather than empowering U.S. decision makers, that threat would also have to be taken seriously by an adversary. U.S. declaratory policy has always emphasized that retaliation for attacks on vital assets will be of a magnitude and by means of our choosing.38 No rational adversary could rule out a disproportionate response or so called “horizontal escalation” (for example in the cyber domain), especially if his conclusion was the same as ours: that limiting ourselves to space-for-space retaliation would leave the U.S. at a disadvantage. He would also have to take into account the possibility of a less than rational response to his action, perhaps leading to an even more rapid escalation.

The Cold War analogy is brinksmanship, the willingness to escalate unpredictably when vital strategic interests are threatened.

#### Debris crashes and Kessler syndrome is mere hype.

**Fange 17** [Daniel von Fange, 5-21-2017, "Kessler Syndrome is Over Hyped”, http://braino.org/essays/kessler\_syndrome\_is\_over\_hyped/]//DDPT

In real life, there’s a lot of factors that make Kessler syndrome even less of a problem than our worst case though experiment.

Debris would be spread over a volume of space, not a single orbital surface, making collisions orders of magnitudes less likely.

Most impact debris will have a slower orbital velocity than either of its original pieces - this makes it deorbit much sooner.

Any collision will create large and small objects. Small objects are much more affected by atmospheric drag and deorbit faster, even in a few months from high LEO. Larger objects can be tracked by earth based radar and avoided.

The planned big new constellations are not in High LEO, but in Low LEO for faster communications with the earth. They aren’t an issue for Kessler.

Most importantly, all new satellite launches since the 1990’s are required to include a plan to get rid of the satellite at the end of its useful life (usually by deorbiting)

So the realistic worst case is that insurance premiums on satellites go up a bit. Given the current trend toward much smaller, cheaper micro satellites, this wouldn’t even have a huge effect.

I’m removing Kessler Syndrome from my list of things to worry about.

#### Thousands of satellites and a half-million objects in space now and only 15 collisions have ever happened.

**Albrecht and Graziani 16** [Mark Albrecht and Paul Graziani, 5-9-2016, "Op-ed," SpaceNews, https://spacenews.com/op-ed-congested-space-is-a-serious-problem-solved-by-hard-work-not-hysteria/]//DDPT

There are over a half million pieces of human-made material in orbit around our planet. Some are the size of school buses, some the size of BB gun pellets. They all had a function at some point, but now most are simply space debris littered from 100 to 22,000 miles above the Earth. Yet, all behave perfectly according to the laws of physics. Many in the space community have called the collision hazard caused by space debris a crisis.

Popular culture has embraced the risks of collisions in space in films like Gravity. Some participants have dramatized the issue by producing graphics of Earth and its satellites, which make our planet look like a fuzzy marble, almost obscured by a dense cloud of white pellets meant to conceptualize space congestion.

Unfortunately, for the sake of a good visual, satellites are depicted as if they were hundreds of miles wide, like the state of Pennsylvania (for the record, there are no space objects the size of Pennsylvania in orbit). Unfortunately, this is the rule, not the exception, and almost all of these articles, movies, graphics, and simulations are exaggerated and misleading. Space debris and collision risk is real, but it certainly is not a crisis.

So what are the facts?

On the positive side, space is empty and it is vast. At the altitude of the International Space Station, one half a degree of Earth longitude is almost 40 miles long. That same one half a degree at geostationary orbit, some 22,000 miles up is over 230 miles long. Generally, we don’t intentionally put satellites closer together than one-half degree. That means at geostationary orbit, they are no closer than 11 times as far as the eye can see on flat ground or on the sea: That’s the horizon over the horizon 10 times over. In addition, other than minute forces like solar winds and sparse bits of atmosphere that still exist 500 miles up, nothing gets in the way of orbiting objects and they behave quite predictably. The location of the smallest spacecraft can be predicated within a 1,000 feet, 24 hours in advance.

Since we first started placing objects into space there have been 11 known low Earth orbit collisions, and three known collisions at geostationary orbit. Think of it: 135 space shuttle flights, all of the Apollo, Gemini and Mercury flights, hundreds of telecommunications satellites, 1,300 functioning satellites on orbit today, half a million total objects in space larger than a marble, and fewer than 15 known collisions. Why do people worry?

#### Military Precedent proves no escalation over sats

Zarybnisky 18, Eric J. Celestial Deterrence: Deterring Aggression in the Global Commons of Space. Naval War College Newport United States, 2018. (Senior Materiel Leader at United States Air Force)//Elmer

PREVENTING AGGRESSION IN SPACE While deterrence and the Cold War are strongly linked in the public’s mind through the nuclear standoff between the United States and the Soviet Union, the fundamentals of deterrence date back millennia and deterrence remains relevant. Thucydides alludes to the concept of deterrence in his telling of the Peloponnesian War when he describes rivals seeking advantages, such as recruiting allies, to dissuade an adversary from starting or expanding a conflict.6F 6 Aggression in space was successfully avoided during the Cold War because both sides viewed an attack on military satellites as highly escalatory, and such an action would likely result in general nuclear war.7F 7 In today’s more nuanced world, attacking satellites, including military satellites, does not necessarily result in nuclear war. For instance, foreign countries have used highpowered lasers against American intelligence-gathering satellites8F 8 and the United States has been reluctant to respond, let alone retaliate with nuclear weapons. This shift in policy is a result of the broader use of gray zone operations, to which countries struggle to respond while limiting escalation. Beginning with the fundamentals of deterrence illuminates how it applies to prevention of aggression in space.

#### No militarization of space – Perez is in the context of more actors in space in general

#### Impact is overstated – constellation sats are significantly smaller which makes both their collision risk and potential debris output much smaller

Skibba 20 (Ramin, MIT Technology Review, "How satellite mega-constellations will change the way we use space," <https://www.technologyreview.com/2020/02/26/905733/satellite-mega-constellations-change-the-way-we-use-space-moon-mars/>DD)

“It’s a rather dynamic environment right now, with a lot of people starting to look at space as a means to answer certain business models,” says Roger Hunter, manager of NASA’s Small Spacecraft Technology program. “I call it the democratization of space.” Constellations offer new levels of versatility. Smaller, cheaper satellites—some just the size of a briefcase—can be arranged in different configurations depending on their goal. Lined up in a string that follows a single orbit, for example, a constellation can repeatedly photograph or surveil the same spot. Starlink, meanwhile, is arranged in a crisscross formation to blanket the planet with internet service. “I think that as an industry we’re trying to figure out how to increase the level of great space-based services that come down and help people on Earth every day, while doing it in a responsible and sustainable way in the orbital environment,” says Mike Safyan, vice president of launch and global ground systems at Planet Labs, which operates the second-largest constellation in operation.

#### Debris risk is overstated – objects are small compared to the size of space and even when collisions happen, damage is minimal

Paradise 15 (Lee A., writer for Science Clarified encyclopedia. 2001, accessed July 29 2015 "Does the accumulation of "space debris" in Earth's orbit pose a significant threat to humans, in space and on the ground?" [www.scienceclarified.com/dispute/Vol-1/Does-the-accumulation-of-space-debris-in-Earth-s-orbit-pose-a-significant-threat-to-humans-in-space-and-on-the-ground.html](http://www.scienceclarified.com/dispute/Vol-1/Does-the-accumulation-of-space-debris-in-Earth-s-orbit-pose-a-significant-threat-to-humans-in-space-and-on-the-ground.html) DD)

Considering the small size of objects like satellites or the shuttle placed against an environment as vast as space, the risk of severe collisions is minimal. Even when an object in space is hit by space debris, the damage is typically negligible even considering the high rate of speed at which the debris travels. Thanks to precautions such as debris shielding, the damage caused by space debris has been kept to a minimum. Before it was brought back to Earth via remote control, the MIR space station received numerous impacts from space debris. None of this minor damage presented any significant problems to the operation of the station or its various missions. The International Space Station (ISS) is designed to withstand direct hits from space debris as large as 0.4 in (1 cm) in size.¶ Most scientists believe that the number of satellites actually destroyed or severely damaged by space debris is extremely low. The Russian Kosmos 1275 is possibly one of these rare instances. The chance of the Hubble Space Telescope suffering the same fate as the Russian satellite is approximately 1% according to Phillis Engelbert and Diane L. Dupuis, authors of The Handy Space Answer Book . Considering the number of satellites and other man-made objects launched into space in the last 40 years, the serious risk posed to satellites is astronomically low.¶ In fact, monitoring systems such as the Space Surveillance Network (SSN) maintain constant track of space debris and Near Earth Orbits. Thanks to ground-based radar and computer extrapolation, this provides an early warning system to determine if even the possibility of a collision with space debris is imminent. With this information, the Space Shuttle can easily maneuver out of the way. The Space Science Branch at the Johnson Space Center predicts the chance of such a collision occurring to be about 1 in 100,000, which is certainly not a significant enough risk to cause panic. Soon the ISS will also have the capability to maneuver in this way as well.

#### Cleanup is working – multiple countries actively co-operate, treaties solve, and new tech is more careful

Paradise 15 (Lee A., writer for Science Clarified encyclopedia. 2001, accessed July 29 "Does the accumulation of "space debris" in Earth's orbit pose a significant threat to humans, in space and on the ground?" [www.scienceclarified.com/dispute/Vol-1/Does-the-accumulation-of-space-debris-in-Earth-s-orbit-pose-a-significant-threat-to-humans-in-space-and-on-the-ground.html](http://www.scienceclarified.com/dispute/Vol-1/Does-the-accumulation-of-space-debris-in-Earth-s-orbit-pose-a-significant-threat-to-humans-in-space-and-on-the-ground.html) DD)

In addition, space agencies around the world have taken steps to reduce space clutter. The United States, for example, has taken an official stand that is outlined in the 1996 National Space Policy that clearly states: "The United States will seek to minimize the creation of new orbital debris." For example, space mechanics are far more careful with regard to their tools. In the past, space mechanics sometimes let go of their tools and were unable to recover them. Strident efforts are now made to retain all objects used to repair satellites and conduct other missions. The Russians have also agreed to do their part. They used to purposely destroy their equipment in space to prevent it from falling into the wrong hands, but now refrain from that practice. Newly designed crafts and operating procedures also play a part in helping to keep space clean, while researchers continue to investigate safe ways to clean up the debris that currently exists. Everything from forcing the debris to reenter the atmosphere in a controlled manner to nudging it away from the Earth's orbit has been discussed. An activity such as collecting garbage from inside the space station and sending it back to Earth to burn up at reentry is one tangible way space explorers are helping to ensure the reduction of space clutter.¶ At this time there is no international treaty on how to deal with space debris; however, several nations have joined together to form the Inter-Agency Space Debris Coordination Committee (IADC). The IADC assesses the subject of space debris and how it should be handled in the future. Japan, like the United States, has developed a list of safety policies regarding space debris. Because this is ultimately a global issue, other countries such as France, The Netherlands, and Germany have jumped on the bandwagon with regard to addressing this issue.