# 1nc

## 1

#### A] interp: the aff may not spec and defend a subset of appropriation

#### Appropriation is a generic indefinite singular. Cohen 01

Ariel Cohen (Ben-Gurion University of the Negev), “On the Generic Use of Indefinite Singulars,” Journal of Semantics 18:3, 2001 <https://core.ac.uk/download/pdf/188590876.pdf>

\*IS generic = Indefinite Singulars

French, then, expresses the two types of reading differently. In English, on¶ the other hand, generic BPs are ambiguous between inductivist and normative¶ readings. But even in English there is one type of generic that can express only¶ one of these readings, and this is the IS generic. While BPs are ambiguous¶ between the inductivist and the rules and regulations readings, ISs are not. In¶ the supermarket scenario discussed above, only (44.b) is true:¶ (44) a. A banana sells for $.49/lb.¶ b. A banana sells for $1.00/lb.¶ The normative force of the generic IS has been noted before. Burton-Roberts¶ (1977) considers the following minimal pair:¶ (45) a. Gentlemen open doors for ladies.¶ b. A gentleman opens doors for ladies.¶ He notes that (45.b), but not (45.a), expresses what he calls “moral necessity.”7¶ Burton-Roberts observes that if Emile does not as a rule open doors for ladies, his mother could utter [(45.b)] and thereby successfully imply that Emile was not, or was¶ not being, a gentleman. Notice that, if she were to utter. . . [(45.a)] she¶ might achieve the same effect (that of getting Emile to open doors for¶ ladies) but would do so by different means. . . For [(45.a)] merely makes a¶ generalisation about gentlemen (p. 188).¶ Sentence (45.b), then, unlike (45.a), does not have a reading where it makes¶ a generalization about gentlemen; it is, rather, a statement about some social¶ norm. It is true just in case this norm is in effect, i.e. it is a member of a set of¶ socially accepted rules and regulations.¶ An IS that, in the null context, cannot be read generically, may receive a¶ generic reading in a context that makes it clear that a rule or a regulation is¶ referred to. For example, Greenberg (1998) notes that, out of the blue, (46.a)¶ and (46.b) do not have a generic reading:¶ (46) a. A Norwegian student whose name ends with ‘s’ or ‘j’ wears green¶ thick socks.¶ b. A tall, left-handed, brown haired neurologist in Hadassa hospital¶ earns more than $50,000 a year.¶ However, Greenberg points out that in the context of (47.a) and (47.b),¶ respectively, the generic readings of the IS subject are quite natural:¶ (47) a. You know, there are very interesting traditions in Norway, concerning the connection between name, profession, and clothing. For¶ example, a Norwegian student. . .¶ b. The new Hadassa manager has some very funny paying criteria. For¶ example, a left-handed. . .¶ Even IS sentences that were claimed above to lack a generic reading, such¶ as (3.b) and (4.b), may, in the appropriate context, receive such a reading:¶ (48) a. Sire, please don’t send her to the axe. Remember, a king is generous!¶ b. How dare you build me such a room? Don’t you know a room is¶ square?

#### Their plan violates. Rules readings are always generalized – specific instances are not consistent. Cohen 01

Ariel Cohen (Ben-Gurion University of the Negev), “On the Generic Use of Indefinite Singulars,” Journal of Semantics 18:3, 2001 https://core.ac.uk/download/pdf/188590876.pdf

In general, as, again, already noted by Aristotle, rules and definitions are not relativized to particular individuals; it is rarely the case that a specific individual¶ forms part of the description of a general rule.¶ Even DPs of the form a certain X or a particular X, which usually receive¶ a wide scope interpretation, cannot, in general, receive such an interpretation in the context of a rule or a definition. This holds of definitions in general, not¶ only of definitions with an IS subject. The following examples from the Cobuild¶ dictionary illustrate this point:¶ (74) a. A fanatic is a person who is very enthusiastic about a particular¶ activity, sport, or way of life.¶ b. Something that is record-breaking is better than the previous¶ record for a particular performance or achievement.¶ c. When a computer outputs something it sorts and produces information as the result of a particular program or operation.¶ d. If something sheers in a particular direction, it suddenly changes¶ direction, for example to avoid hitting something.

#### That outweighs—only our evidence speaks to how indefinite singulars are interpreted in the context of normative statements like the resolution. This means throw out aff counter-interpretations that are purely descriptive

#### B] violation: they did

#### vote neg:

#### 1] precision ­– their interp justifies the aff getting away w random words in the res which decks neg ground and prep bc they’re no longer bounded by the res

#### 2] limits ­– they explode the topic since they can spec any appropriation ie mining, asats, exploration, etc ­– spec means generic da’s don’t link which decks neg ground, kills clash, causing appropriation of the week affs which makes reciprocal prep impossible

#### tva ­– advantages under a wholres aff

#### paradigm issues:

#### 1] accessibility – it is literally impossible for me to cut nc’s to every possible aff

#### 2] fairness is a voter ­– debate’s a competitive activity that requires equal opportunities for both sides

#### 3] education is a voter ­– its why schools fund debate, nobody’s learning anything if we are having blippy debates about blippy args bc the aff was non t

#### 4] dtd for norm setting especially this early on in the topic – dta makes no sense bc we indict their advocacy, use competing interps ­– reasonability invites arbitrary judge intervention, no rvis ­– you don’t win for being fair

## 2

#### cp text: the ost should be revised to clarify that the language in Article II prohibiting national appropriation does not apply to private companies

#### solves 100% of case – legalizes mining and facilitates conflict resolution

Heise 18, Jack Heise, 2018. "Space, The Final Frontier Of Enterprise: Incentivizing Asteroid Mining Under A Revised International Framework". University Of Michigan Law School Scholarship Repository. <https://repository.law.umich.edu/mjil/vol40/iss1/5/>. //tanya

A. The Desirability of an International Framework The preservation of space as a zone governed by international law, in contrast to a system predicated on national jurisdiction, is desirable in that it promotes peace, facilitates dispute resolution, and allows for more coordinated efforts in addressing issues relevant to all entities operating in space.98 As illustrated by the recent legislative activity in the United States and Luxembourg, the risk of inaction is the resultant domination of the extraterrestrial environment by individual nations rather than by international agreement.99 It would take only minor changes to the OST to resolve some of the ambiguities in the status quo and help bring the benefits of asteroid mining to humanity as a whole. A revision of this treaty rather than a wholesale abandonment of the agreement—whether that abandonment is in fact or merely in practice—would better maintain the international character of space. The OST reflects Cold War era concerns about the militarization of space.100 Private companies, now ascendant in the growing space economy, simply do not have the military capacity or intention of sovereign governments. In short, the factual backdrop for the signing of the OST has changed. One straightforward means of authorizing private companies to extract space resources would be to revise the OST to clarify that the language in Article II prohibiting national appropriation does not apply to private companies. This could be achieved by simply adding a sentence to the end of Article VI: Under the revised treaty, companies shall remain under the supervision of the countries in which they are based but are not capable of national appropriation by use or occupation. This revision would create something of a line-drawing problem given the partnerships between sovereign space agencies and private companies,101 as well as a possible loophole by which unscrupulous nations could take advantage of the corporate form. Additional safeguards might be necessary to prevent this possibility. This revision could, however, promote peaceful coexistence and uniformity in space law, as well as create certainty as to the legality of asteroid mining by private companies. An amended OST or a new treaty governing the extraction of space resources would have the benefit of maintaining the peaceful order of space. While admittedly the product of a different era, the post-national and peaceable foundation of the OST is still desirable in an international environment where many nations are armed to the proverbial nuclear teeth. Peaceful use of outer space is a laudable objective and one served most effectively by international agreement rather than by competing national claims of sovereignty.106 An international system would also facilitate dispute resolution. In a borderless and extra-jurisdictional realm like outer space, a system predicated on national sovereignty and ownership is not instructive as to whose laws—or whose choice of law rules—would control in the event of disputed title of an asteroid or the commission of a tort between two actors from different nations.107 The United Nations Convention on the Law of the Sea (the “UNCLOS”) established the International Tribunal for the Law of the Sea (the “ITLOS”) as a means of providing a venue in which similar disputes could be adjudicated between actors with conflicting legal regimes.108 Outer space has a great deal of similarity to the high seas: both are vast, both are easily treated as a non-appropriable international commons, and both are an in-between space in the sense of existing between bodies of terra firma. 109 An international mechanism like ITLOS ought to be established for resolving space disputes such that parties can seek a neutral arbiter to resolve conflict and laws can be uniformly applied to all entities irrespective of their country of origin.110 Finally, an international system could more easily allow for cooperation between nations and private entities in addressing issues that affect the spacefaring community as a whole. The emergence of space debris and the use of nuclear power sources in space are examples of developing issues that bear on the ease and safety of space travel for all.111 Left to national governments or individual corporations, it seems plausible that lack of oversight could result in a tragedy of the commons.112 By contrast, an international framework is well-suited to consider the problems of the space ecosystem in a way that transcends national boundaries. The UNCLOS Preamble, for example, demonstrates an awareness that “problems of ocean space are closely interrelated and need to be considered as a whole.”113 The compelling interests of peace, uniformity, and cooperation in outer space illustrate the desirability of an international framework to govern asteroid mining; to tweak rather than jettison the existing law. The resulting clarity and predictability would incentivize asteroid mining through reducing legal risk and uncertainty. However, a nation-centric, first possession framework has drawbacks that highlight the desirability of an international governance regime for asteroid mining. First, the experience of colonization was one that prompted conflict between colonizers.122 The peaceful character of space is one of the great achievements of the OST, and it should not be jettisoned. Second, a regime characterized by national actors could spark a race to the bottom with respect to domestic regulation, leading to the same “flags of convenience” problem present in the maritime context as asteroid mining and spaceflight companies relocate to avoid taxes, labor and safety standards, and tort liability.123 An international framework, by contrast, could more easily prevent this problem by facilitating the creation of uniform standards for labor, safety, and liability, making relocation to under-regulated states a less attractive prospect. The drawbacks of a system governed by individual nations, in conjunction with the advantages of a global system illustrated above, point to the desirability of a revised framework governing asteroid mining that is international in character. B. A System with Minimal Regulatory Barriers to Entry Whatever approach is chosen to resolve the ambiguities in the OST ought not to be overly restrictive or create burdensome regulatory obstacles for private asteroid mining companies. Substantial regulation could discourage investment and hamper the development of an already capital-intensive and high-risk industry.124 The ideal regulatory system for asteroid mining should maintain an international character for the reasons described in the previous section but should not impose cumbersome regulation on asteroid mining companies at this stage in their development. Rather, allowing norms to develop over time through the resolution of disputes between asteroid mining companies would likely result in the most efficient regulatory system and would be more attractive to companies and nations that might be tempted to disregard the treaty. Robert Ellickson, in his Hypothesis of Wealth-Maximizing Norms, cited the development of whaling norms as supporting the idea that, “when people are situated in a close-knit group, they will tend to develop for the ordinary run of problems norms that are wealth-maximizing.”132 Ellickson defines wealth-maximizing norms as those that minimize the sum of transaction costs and deadweight losses that the members of a group objectively incur.133 Those involved in the group activity are likely to develop rules in a utilitarian manner, preferring “bright-line rules that would eliminate arguments to fuzzy rules that would prolong disputes.”134 The few asteroid mining companies currently in existence are not only a close-knit group under Ellickson’s definition,135 but are best positioned to create rules that will give rise to greater clarity and reduce transaction costs due to their proximity to and soon-to-be-developed experience with the business of asteroid mining. Rules like these would incentivize asteroid mining through greater legal clarity and predictability, thus facilitating the delivery of asteroid mining’s benefits to all mankind. The UNCLOS ratification debate helps illustrate why a more substantial regulatory regime might prove counterproductive for the international community. One of the primary reasons cited by American opponents of ratification is that accession to the treaty would subject American mining companies “to the whims of an unelected and unaccountable bureaucracy and would force them to pay excessive fees to the International Seabed Authority for redistribution to developing countries.”136 While other commentators have dismissed these concerns as “pure nonsense,” noting that these same companies favor accession to the treaty for the sake of having a clear legal claim to mined minerals,137 it is easy to imagine that a similar scheme of bureaucratic redistribution in the context of asteroid mining might be disregarded by the United States. A decision by nations leading the way on asteroid mining to opt out of a treaty would for all practical purposes cripple future treaty efforts. A key advantage of the proposed regulatory framework described in this Note is a practical one: it would offer the attractive prospect of legal clarity without an international bureaucratic bogeyman, making it more likely that key national stakeholders like the United States would sign on. Conclusion Maintaining the international character of outer space while allowing private companies to develop their own governing norms under a slightly revised OST would preempt the outbreak of a new race by sovereign governments to colonize space; create greater certainty for those undertaking the enterprise of asteroid mining; and permit the development of an efficient system tailored to maximize returns on celestial investment. The asteroid mining industry has the potential to confer benefits on all mankind as a means of facilitating space travel, spurring the development of science and technology, mitigating the potential for a calamitous asteroid impact, and facilitating climate change mitigation efforts. As such, it is in the interest of all nations to revise the OST to allow greater certainty in this endeavor. While the “entire unimaginable infinity of creation”138 is still out of reach based on our existing physics and engineering capabilities, asteroid mining is a critical step in beginning to harness celestial resources and more fully explore the intricacies of the universe around us.

## 3

#### US space commercialization is key to nuclear deterrence

Gleason and Hays 21, Michael P. Gleason and Peter L. Hays,, 2021, " GETTING THE MOST DETERRENT VALUE FROM U.S. SPACE FORCES" CENTER FOR SPACE POLICY AND STRATEGY, [https://csps.aerospace.org/sites/default/files/2021-08/Gleason-Hays\_SpaceDeterrence\_20201027\_0.pdf //](https://csps.aerospace.org/sites/default/files/2021-08/Gleason-Hays_SpaceDeterrence_20201027_0.pdf%20//)wr tanya

As the strategic environment changes, we must explore ways to strengthen the contribution of U.S. military space capabilities to deterrence while also enhance any advantages should deterrence fail. Focusing on the credibility of U.S. space capabilities in some narrow areas reveals steps that could be made to strengthen their deterrent value. The vulnerability of U.S. military, intelligence, and partner satellites to these threats weakens the United States’ conventional deterrence abilities and potentially undermines the U.S. nuclear deterrent. Conventionally, Russia and China see their space attack capabilities as a means to level the battlefield with the U.S. military. U.S. military and intelligence satellites, as well as the commercial satellites the U.S. military uses, are critical to the modern American way of war. But if those satellites can be destroyed or at least disrupted, Russian and Chinese terrestrial forces may perceive a narrower disadvantage and those nations may be more willing to start a war. U.S. space capabilities enable U.S. nuclear deterrence strategy by gathering and delivering intelligence on adversaries’ nuclear weapons dispositions, verifying Russian compliance with nuclear arms control agreements, providing the United States with warning of a nuclear attack, and providing U.S. decision-makers with tight command and control of U.S. nuclear forces. If attacking those satellite capabilities is perceived as a way to prevent the United States from responding to a nuclear attack, nuclear deterrence may be undermined. Moreover, even if the adversary attacks U.S. satellites only in pursuit of limited, regional objectives, the United States may perceive itself to be under strategic attack. The United States considers unfettered access to and freedom to operate in space to be a vital interest. Any harmful interference with or an attack upon critical components of our space architecture that directly affects this vital U.S. interest will be met with a deliberate response at a time, place, manner, and domain of our choosing. Under this threat, actors may be deterred from undesired behavior if they conclude that the costs of the behavior outweigh the benefits. Denial, by contrast, attempts to deter undesired behavior by leading actors to conclude that they will be unable to achieve the objectives they seek from their behavior. Denial requires effectively responding in the same time and place as the attack. To prevent a breakdown in deterrence, both punishment and denial require that the actor attempting to deter undesired behavior is perceived as possessing needed capabilities, is credible in exercising those capabilities under threat of counterretaliation and potential escalation, and has successfully communicated its capabilities and credibility to the actors it intends to deter. A deterrence by punishment strategy has more stringent attribution requirements. To justify a punitive response elsewhere, an actor must have defensible evidence of what happened that it is willing to share with allies and the public. If an adversary is confident that its responsibility for an attack may be obscured or unattributable—quite possible in space with all the attribution difficulties noted above— the adversary may calculate that it can avoid retaliation for the attack and get away with a fait accompli. Therefore, for deterrence by punishment to be most credible, the adversary must perceive that it will not be able to escape responsibility for an attack in space due to the United States’ inadequate ability to confidently attribute the attack. In contrast, deterrence by denial emphasizes the ability to absorb an attack at the time and place it occurs, so rapid, precise attribution of an attack in space may appear relatively less important. However, the line between deterrence by denial and punishment is blurry at best. Strategists might assume that if the threat of denial fails, they still have the threat of punishment to wield. In essence, the threat of punishment usually backstops a denial deterrence strategy. If that is the case, it leads to the notion that both denial and punishment strategies require the same attribution strategy. The United States must also ensure that adversaries know U.S. space capabilities can withstand attacks. Weak links make for tempting, first-strike targets and can lead to a breakdown in deterrence no matter where the capabilities physically reside. Increasing satellite and space architectural resilience and defenses can make space a strong link that discourages rather than tempts attack.

#### Deterrence is k2 ally assurance – soko is on the brink of prolif

Dalton and Han 20, Toby Dalton, Ain Han, 10-26-2020, "Elections, Nukes, and the Future of the South Korea–U.S. Alliance," Carnegie Endowment for International Peace, <https://carnegieendowment.org/2020/10/26/elections-nukes-and-future-of-south-korea-u.s.-alliance-pub-83044> //wr tanya

The impressive victory of President Moon Jae-in’s Democratic Party in South Korea’s April 2020 National Assembly elections obscured underlying security policy tensions within South Korea (or the Republic of Korea, ROK). These tensions reflect a deep and long-standing domestic split over how to deal with a nuclear North Korea and, to a lesser extent, concerns about the security alliance with the United States amid rising regional threats. In public opinion polls a consistent majority of South Koreans support acquiring nuclear weapons in some form, and centrist and conservative political parties have adopted official platforms calling on the United States to re-station nuclear weapons on the Korean Peninsula. Looking beyond the November 2020 U.S. election, the stage is set for a potentially disruptive period in ROK-U.S. security relations. If today’s tensions build, a worst-case clash of ideas and priorities between Seoul and Washington could rupture the ROK-U.S. alliance and lead South Korea to pursue nuclear weapons. This is not highly likely, but it is imaginable. Opposition party candidates often criticized Moon’s foreign policy in the campaign and sought to make it a wedge issue. Moon’s efforts to build new peaceful relations with North Korea drew particular ire from conservatives, who derisively termed it a “submissive policy.” Although public support for Moon’s North Korea policy swelled to 83 percent in a May 2018 Gallup Poll, conducted just prior to the June North Korea–U.S. Summit in Singapore, by August 2019 optimism had waned and 50 percent of polled South Koreans indicated disapproval of Moon’s engagement policy (see figure 1). But it also seems that South Koreans are becoming somewhat inured to the danger from North Korea as other national security challenges arise. Although absolute threat perception of North Korea remains high, shifts in South Koreans’ relative threat perception suggest a more nuanced picture. When asked to rank the country most threatening to peace on the Korean Peninsula, South Koreans identified North Korea as the top choice from 2008 to 2017, a period in which North Korea conducted five nuclear explosive tests, launched missiles of increasing range, and provoked several political and military crises with South Korea. After 2016, however, perceived dangers from North Korea began to decline, and since 2018, polled individuals have identified China as the main threat, North Korea second, and Japan a close third (see figure 3). At a time when South Koreans perceive growing threats in the region, public support for the ROK-U.S. alliance remains understandably high. In two polls by the Chicago Council on Global Affairs in December 2019 and June 2020, over 90 percent of South Korean respondents backed the alliance. This figure is similar to the 96 percent support indicated by a 2014 poll conducted by the Asan Institute for Policy Studies, suggesting relatively consistent views over time.1 Respondents in the Chicago Council polls also overwhelmingly supported maintaining U.S. troops in South Korea (74 percent) and sustaining the U.S. extended nuclear deterrence “umbrella” (71 percent). Polled South Koreans expressed confidence that the United States would defend South Korea if attacked by North Korea (78 percent), and affirmed that the alliance is to the mutual benefit of both countries (63 percent). Although South Koreans apparently do not perceive the burden-sharing disagreement as indicative of weakening U.S. credibility to defend South Korea (yet), a potential U.S. troop withdrawal reportedly under consideration by the administration of U.S. President Donald Trump could affect their confidence in the U.S. commitment. The June 2020 Chicago Council poll assessed that such a move could damage the alliance because it “has the potential to shift South Korean attitudes away from seeing the alliance as mutually beneficial and towards views that the alliance benefits only the United States.” This finding reinforces other sources of tension seen in South Korean public opinion that suggest a cleavage of purpose in the alliance, with South Koreans increasingly of the view that Seoul and Washington have divergent security objectives. In the December 2019 Chicago Council poll, some 55 percent of respondents indicated that South Korea and the United States were not aligned on regional security issues, while 52 percent also believed the two states were working in different directions on denuclearizing North Korea. Even if money issues are resolved, these basic questions about shared objectives will remain. Considering that South Koreans remain quite concerned about the threat from North Korea, and increasingly concerned about regional security, it is striking that a majority of South Koreans believe simultaneously that the alliance remains mutually beneficial but that Washington is not working with Seoul’s interests in mind. It is plausible that if South Koreans perceive a dichotomous choice between alliance or going it alone, then the alliance is preferable, at least so long as South Korea does not possess sufficiently robust defense capabilities for the panoply of regional threats. However, Trump’s threats to withdraw troops in the context of burden-sharing negotiations underscore doubts in the minds of many South Koreans about the credibility of U.S. commitments, even if this impact is not fully reflected in the survey results. Amid rising threats in the region over the last two decades, periodic public opinion polling demonstrates consistent majority support in South Korea to have the protection of nuclear weapons—either American nuclear missiles deployed on the Korean Peninsula or an independent South Korean nuclear arsenal. The level of support has varied over the years and according to the question, timing, and polling methodology, but most polls place support between 50 and 70 percent. Longitudinal polling by SNU IPUS showed that between 2013 and 2016 a majority of respondents agreed that South Korea should possess nuclear weapons. Though that support dipped under 50 percent after 2016, the percentage of people opposed to possession of nuclear weapons has remained low, peaking at just over 27 percent in 2019 (see figure 4). Notably, South Korean polling on nuclear weapons does not differentiate between two options with vastly different implications for South Korean security: U.S. re-stationing of tactical nuclear weapons in South Korea, or South Korean development and possession of its own nuclear arsenal. In the first option, South Korea would preserve its nonproliferation commitments and invest further trust in the United States to manage nuclear deterrence on the Korean Peninsula. In the second, South Korea would violate its nonproliferation pledges, with uncertain implications for the status of its alliance with the United States. One of the few surveys to poll attitudes on both options—a 2016 poll carried out by Yonhap News and KBS—showed that 29.3 percent supported South Korea developing its own arsenal, while 23.2 percent supported redeployment of U.S. tactical nuclear weapons. This slight preference for an independent arsenal, despite the uncertain implications for the U.S. alliance and vitiation of South Korea’s nonproliferation commitments, is noteworthy. One recent public opinion poll that posed a very different question sheds interesting light on this matter.

#### Uncredible us deterrence causes soko prolif – asian arms race

**Lind 16** [Jennifer, Associate Professor of Government, Faculty Associate, Reischauer Insitute for Japanese Studies, Harvard University, Research Associate, Chatham House, London “Keep, Toss, or Fix? Assessing US Alliances in East Asia”, <http://www.tobinproject.org/sites/tobinproject.org/files/assets/Lind%20-%20Keep%2C%20Toss%2C%20or%20Fix.pdf>] //// LRCH Jrhee

US alliances in East Asia aim to serve several broad goals. The first is to (1) deter attacks on allied nations. South Korea has the most heightened threat: the alliance seeks to protect South Korea from attack by North Korea. Additionally, in recent years the region has seen an intensification of island disputes between China and its neighbors in the South China Sea, and between China and Japan in the East China Sea.17 Proponents of US engagement in the region cite the deterrent role played by American alliances, and by the US military presence that they facilitate.18 Second, US alliances in East Asia further the goal of (2) maintaining regional stability in a region of great economic and political significance. The notion of regional stability encompasses several different ideas: • Prevention of nuclear spread. The United States government takes the position that the spread of nuclear weapons is detrimental to international stability. It pledged under the 1968 Nuclear Non-Proliferation treaty to cooperate to reduce the spread of nuclear weapons, and to reduce the size of its own arsenal over time. In East Asia, US alliance commitments are partly aimed at reducing the likelihood of nuclear spread throughout the region through the provision of a nuclear umbrella to Japan and South Korea. • Prevention of conventional arms races. Due to historical animosities, territorial disputes, and the growth of Chinese power, East Asian countries may feel mistrust and uncertainty that would lead them to build up their conventional military power. Through the logic of the security dilemma (in which one country’s effort to increase its own security reduces the security of another), this has the potential to fuel arms racing.19 Such arms racing would hinder beneficial economic relations in the region, would be inefficient for the global economy, could sour broader political relations, and could raise the risk of conventional conflict. The United States aims to reduce arms races in East Asia by guaranteeing the security of several states in the region, and by maintaining a powerful military presence there. Lind | Keep, Toss, or Fix? 7 • Free and uninterrupted access to sea lanes. The United States (specifically the US Seventh Fleet, based on Yokosuka, Japan) is the dominant naval power in a region home to some of the busiest trade routes in the world. The prosperity of the United States (as well as China, South Korea, Japan, and so on) relies upon the uninterrupted flow of shipping through regional sea lanes. Analysts argue that the interruption of those trade flows due to war or terrorist attacks would create supply chain problems and other costly economic disruptions. The smooth flow of sea traffic, military as well as commercial, depends on managing threats such as piracy, and on the region’s respect for the law of the sea. The UN Convention of the Law of the Sea (UNCLOS) governs the sovereignty, rights of transit, and economic rights to the millions of miles of coastline and thousands of islands throughout the region.20 • Generally cooperative relations among US allies and partners. The United States benefits from friendly relations among like-minded countries in East Asia. Close ties among these countries reduce the likelihood of regional disputes and crises, and facilitate diplomacy in a variety of realms. Good state-level relations among the United States and these countries improves the lives of their very intermingled people, who intermarry, work, and travel in these countries. Third, (3) the US seeks to keep these countries “on its team”—namely, within the US political orbit (and, by definition, out of a rival political orbit).21 A country can be said to be in the US political orbit if it has friendly relations and broadly overlapping national interests with the United States, and if it frequently cooperates with Washington. Many analysts argue that countries in the US orbit are more likely to be receptive to concluding trade and other economic agreements.22 They are more likely to cooperate with US diplomatic goals, and to cooperate militarily (such as training with the US military, providing overflight routes, and even contributing forces for US-led military operations). Countries in the US orbit are more likely to ally with the United States if trouble arises and less likely to succumb to external pressure. While military alliances (i.e., security guarantees or mutual defense agreements) send a clear sign that a country lies within the US orbit, “orbit” and “alliance” are not synonymous. Israel, for example, is within the US orbit; it cooperates broadly with the United States in many different realms (including national security) without a formal defense agreement. Many other countries occupy this category: Bahrain, Kuwait, Saudi Arabia, Singapore, Taiwan, Thailand, and (previously) Egypt. In some analysts’ eyes, the United States has a fourth critical goal, as important of any of the above: namely, the goal of maintaining US military power and presence in the region. They argue that the United States has an interest in having substantial power in Asia due to its importance: the region’s economic dynamism and the emergence of China. Such analysts see power projection capabilities and military presence as an end in and of itself. By contrast, I treat US military presence and power projection in East Asia as a means to an end: to deter, to contain, to assure, to stabilize. The questions, examined in this chapter, are whether US military presence and commitments actually promote these goals, and whether the gains are worth the costs and risks they bring. A final word about liberalism. After all, a plank of US foreign policy writ large is to encourage the spread of democracy and to promote US values abroad. In Asia, the United States promoted the development of democracy in Japan, and explains continued support for Taiwan in part by noting shared democratic values. Washington today encourages nascent political reform in Myanmar.23 However, democracy promotion has not been a first-order goal in Asia: for decades, Washington supported anti-communist dictators in the region (notably in South Korea, Taiwan, and South Vietnam). The United States, including the Obama Administration, has also pursued a pragmatic approach toward China that prioritizes stable Sino-American relations over concerns about the Chinese Communist Party’s political repression and human rights violations.24 Though the spread of liberalism remains a broad American goal, it is not a firstorder national security goal in East Asia. DO AMERICA’S ASIAN ALLIANCES ADVANCE ITS NATIONAL SECURITY GOALS? Deterrence Deterring war in East Asia is a key goal of American alliances, and the alliance with South Korea aims to deter a second war on the Korean peninsula. North Korea invaded the South in 1950; after the 1953 armistice that ended the Korean War, Pyongyang continued to claim that it was the sole legitimate government of the Korean people, and continued to advocate unification under North Korean rule. For the past half-century, however, North Korea has been deterred from once again attempting to conquer the South. At the same time, Pyongyang not been deterred from initiating lower-level acts of violence. Over the past six decades, North Korea has repeatedly launched egregious attacks on the ROK—e.g., terrorist bombings and assassination attempts of South Korean presidents— albeit below the level of full-scale conventional war.25 The most recent attacks were North Korea’s sinking of the South Korean warship Cheonan (which killed forty-six sailors) and its shelling of Yongpyeong Island, in March and November 2010. A debate over whether deterrence should be characterized as “working” or “failing” is merely semantic: major attacks are being deterred; lesser acts of violence are not. The crucial question for US national security policy is: what is deterring major war on the Korean peninsula? Is the US-ROK alliance causing peace, or are South Korean military capabilities independently sufficient to prevent major war? The dramatic power asymmetry in the South’s favor suggests that North Korea would be deterred from attacking South Korea even without a US-ROK alliance. South Korea is an advanced, OECD country (the fourteenth largest economy in the world), whose GDP dwarfs North Korea’s ($1.8 trillion compared to $40 billion).26 South Korea also has a large and welltrained military, with advanced technology that outclasses its antiquated North Korean counterpart. For example, North Korea’s most modern tank was built in 1962; North Korea’s army would be beset by problems related to lack of fuel, ammunition, and spare parts. Military analysts thus long ago concluded that South Korea would dominate in any conventional war with 10 North Korea.27 North Korean soldiers are also likely to be hamstrung by hunger, low morale, and leadership ineptitude because the Kim regime’s policies of “coup-proofing” reduce military effectiveness.28 In sum, borrowing from John Mueller, if North Korea were to attack South Korea absent a US alliance, it would be like jumping off the 5th floor of a building. If North Korea attacked South Korea and the United States, it would be like jumping off the 50th floor. If Pyongyang is rational enough to fear for its own existence, it is unclear how much practical difference those additional stories make.29 Taiwan. Despite the absence of a formal alliance with Taiwan, US policy deters conflict in the Taiwan Strait. Since the founding of the People’s Republic of China, the Chinese Communist Party (CCP) has consistently stated that Taiwan is part of China, that “national unification” is a core interest of the CCP, and that a Taiwanese declaration of independence would lead Beijing to use military force. Although the United States ended its 1954 security treaty with Taiwan more than three decades ago, the Taiwan Relations Act passed by Congress in 1979 has been interpreted as an expression of American interest and potential involvement in a crisis in the strait. Many American officials and foreign policy analysts still express frequent support for Taiwan, and argue that Washington would experience a serious loss of credibility if it did not respond to a Chinese use of force against Taipei.30 The fact that the United States might come to Taiwan’s aid helps deter China from using force; the fact that it might not come to Taiwan’s aid helps deter Taiwan from declaring independence.31 Japan and the Philippines. Second, US alliances with Japan and the Philippines likely deter the use of force in regional territorial disputes. In recent years Beijing has changed the territorial status quo and has adopted more assertive military and diplomatic policies. China has pursued extensive island reclamation in the South China Sea, creating nearly 3,000 acres of land, what PACOM Commander Admiral Harry Harris has dubbed a “Great Wall of Sand.”32 Analysts argue that through island reclamation and the construction of military runways and other facilities, China is expanding its ability to project power across the area, and to intimidate neighbors who dispute Chinese territorial claims.33 11 Beijing’s policies have also grown increasingly assertive in disputed areas. Chinese ships and submarines more frequently enter disputed territorial waters around the Spratly and Paracel islands in the South China Sea, and have harassed other countries’ fishing ships, coast guards, and naval vessels.34 In 2012, China negotiated an agreement with the Philippines to demilitarize the disputed Scarborough Shoal—but after the Philippines withdrew its military forces, China left its own forces there and has since cut off Philippine access. James Kraska writes, “China’s control of access to the feature is dependent upon coercive law enforcement and militia fishing vessel operations, including ramming and shouldering Philippine ships, and harassment of Philippine fishermen.”35 In 2014 in the Paracel Islands (disputed with Vietnam), the Chinese national oil company CNOOC installed an oil rig in disputed waters and drilled for oil, sparking diplomatic protests and anti-Chinese rallies in Hanoi. Vietnam has also protested China’s construction of a two kilometer runway on one of the disputed islands, which enhances its local power projection capabilities.36 In the East China Sea, a growing number of Chinese ships and jets enter waters around the Senkaku/Diaoyu islands disputed with Japan. In 2013, Beijing declared an Air Defense Identification Zone or ADIZ over the islands.37 Observers attribute China’s assertive policies to a long, patient strategy of “salami tactics” in which China increasingly seeks to dominate the region by changing the “facts on the ground” one step at a time.38 US alliances with the Philippines and Japan, by linking these countries to the region’s military superpower, help deter Chinese aggression in these regional territorial disputes. In the absence of the US commitments, Philippine military weakness, and the anticipation of a weak response from Japan,39 might convince the Chinese government that it might successfully advance its interests through faits accompli. The Chinese Communist Party, facing challenges to its domestic legitimacy and an increasingly nationalistic and noisy populace, has political incentives for diversionary efforts.40 Such pressures may grow increasingly intense at a time of declining Chinese economic growth.41 In a climate of increasing Chinese assertiveness in its territorial claims (an assertiveness that is only likely to grow),42 America’s Asian alliances help deter Beijing from using force. Nuclear Non-Proliferation **US alliances unquestionably reduce the spread of nuclear weapons in East Asia.** Japan and South Korea’s acquisition of nuclear weapons is still possible even within the context of their relationship with the United States, but nuclear and conventional US security guarantees make this outcome much less likely. Out of the various factors that affect countries’ decisions to acquire nuclear weapons, the security motivation is among the most powerful.43 According to this explanation, countries will acquire nuclear weapons if they are facing a potentially hostile actor that acquires nuclear weapons, or that outmatches them conventionally. Scholars have also found, however, that proliferation can be reduced through security guarantees—that sometimes threatened actors will not acquire nuclear weapons if they can rely on an ally’s protection.44 According to this logic, the loss of a security guarantee would encourage the abandoned and threatened ally to decide to acquire nuclear weapons. **American security guarantees have kept, and may yet keep, South Korea from acquiring nuclear weapons of its own**. When Seoul signed the Nuclear Non-proliferation Treaty (NPT) in 1968, it stated that its membership “would only be contingent on robust US security commitments.”45 Indeed, in the past when the United States has contemplated significant changes in its policy or force posture in Korea, Seoul began a nuclear program (as seen in 1969 under the Guam Doctrine, or in 1977 when the Carter Administration planned a troop withdrawal).46 And that was before North Korea acquired nuclear weapons. Today, because South Korea faces a nuclear-armed North Korea, the security model would predict that, if Washington ended its security guarantee, South Korea would acquire nuclear weapons. In fact, even a robust US alliance may no longer be sufficient to prevent Seoul from acquiring an independent nuclear capability. (During the Cold War, after all, American allies France and the United Kingdom both acquired nuclear weapons despite US and NATO protection.) In the past several years, Pyongyang has conducted nuclear and missile tests, and has 13 engaged in acts of violence toward the South such as the 2010 sinking of the naval vessel Cheonan and the shelling of Yongpyeong Island. After North Korea’s 2013 nuclear test, poll data showed that over two-thirds of South Koreans favored going nuclear.47 Short of that, Seoul might negotiate for the reintroduction of US tactical nuclear weapons to the peninsula (removed in 1991), or might seek a nuclear sharing agreement such as the one in effect among the United States and several NATO countries (Germany, Belgium, and Italy: all states, like South Korea, that are non-nuclear states and NPT signatories). As for Japan, **the end of the US-Japan alliance could indeed lead Tokyo to acquire nuclear weapons**. Given that during the Cold War the Soviets were bristling with nuclear weapons, and that the Chinese and North Koreans also acquired them, Japan probably would have acquired nuclear weapons by now absent the US nuclear umbrella. As Prime Minister Sato Eisaku told the US ambassador in 1964, “it is common sense that we should possess nuclear weapons if everyone else does.”48 Japanese leaders for decades have declared that acquiring nuclear weapons would not violate Japan’s constitution.49 Today, Japan lives next to an avowedly hostile North Korea—which not only has nuclear weapons, but threatens to turn Japanese cities into a “sea of fire.” Japan lives among nuclear-armed Russia, and a nuclear-armed China that is modernizing its maritime forces, and increasingly sending them into what Tokyo believes to be Japanese territorial waters. Given this strategic environment, it is very possible that absent the US security guarantee, Japan would feel compelled to acquire an independent nuclear weapons capability. But Japan’s nuclear acquisition in this situation should not be seen as a foregone conclusion.50 Japan’s people are highly anti-nuclear since suffering two nuclear strikes by the United States in World War II, as well as a 1954 domestic crisis over the “Lucky Dragon” fishing boat, whose crew and catch was irradiated by US nuclear testing. Antinuclear sentiment was reinvigorated after the 2011 tsunami and nuclear disaster at Fukushima. A decision to acquire nuclear weapons would thus be politically fraught and costly.51 Externally, Japan’s acquisition of nuclear weapons could have undesirable effects because Japan’s neighbors are sensitive to increases in Japan’s military power. Finally, Japan is an NPT member and (as the sole country to have suffered nuclear attacks) has taken a leadership role in the global nonproliferation effort. A turnabout of this magnitude would be a dramatic move decried by many Japanese, and by many other countries. Given domestic, regional, and global sensitivities, given Japan’s more secure status as an island nation, and given its strong maritime military capabilities, Tokyo might therefore decide against acquiring nuclear weapons, at least in the short or medium term. It might quietly take steps that moved Japan closer to a nuclear-weapons capability—an approach designed to shorten the time it would take to deploy a full nuclear deterrent while avoiding the costs associated with nuclear acquisition. Japan’s large stockpile of plutonium would greatly facilitate development of such a “virtual” nuclear deterrent.52 In sum, absent US security guarantees, nuclear weapons would likely spread to South Korea and possibly to Japan. Some scholars would not be troubled by this prospect: some view the spread of nuclear weapons as stabilizing in world politics, arguing that (because nuclear weapons raise the costs of war) nuclear weapons deter wars among states that possess them. Furthermore, such scholars would view the countries in question (Japan and the ROK) as responsible stewards of nuclear technology—being democratic, technologically advanced, wealthy, and politically stable.53 But the bottom line is that **the end of US security guarantees in East Asia would almost certainly lead to the spread of nuclear weapons to Korea and might lead to nuclear spread to Japan**

#### It goes nuclear – mad fails

**Kroenig, 14** – Associate Professor and International Relations Field Chair, Department of Government, Georgetown (Matthew, February. “The History of Proliferation Optimism: Does It Have a Future?” Journal of Strategic Studies Vol 38, Issue 1-2. http://www.matthewkroenig.com/The%20History%20of%20Proliferation%20Optimism\_Feb2014.pdf)

First and foremost, proliferation **optimists present an oversimplified view of nuclear deterrence theory**. Optimists argue that since the advent of Mutually Assured Destruction (MAD), any nuclear war would mean national suicide and, therefore, no rational leader would ever choose to start one. Furthermore, they argue that the requirements for rationality are not high. Rather, leaders must value their own survival and the survival of their nation and understand that intentionally launching a nuclear war would threaten those values. Many analysts and policymakers attempt to challenge the optimists on their own turf and question whether the leaders of potential proliferant states are fully rational.34 Yet, these debates overlook the fact that, apart from the optimists, leading nuclear deterrence theorists believe that nuclear proliferation contributes to a **real risk of nuclear war even in a situation of MAD among rational states**.35 Moreover, realizing that nuclear war is possible does not depend on peculiar beliefs about the possibility of escaping MAD.36 Rather, as we will discuss below, these theorists understand that some risk of nuclear war is **necessary in order for deterrence to function**. To be sure, in the 1940s, Viner, Brodie, and others argued that MAD rendered war among major powers obsolete, but nuclear deterrence theory soon advanced beyond that simple understanding.37 After all, great power political competition does not end with nuclear weapons. And nuclear-armed states still seek to threaten nuclear-armed adversaries. States cannot credibly threaten to launch a suicidal nuclear war, but they still want to coerce their adversaries. This leads to a credibility problem: how can states credibly threaten a nuclear-armed opponent? Since the 1960s, academic nuclear deterrence theory has been devoted almost exclusively to answering this question.38 And their answers do not give us reasons to be optimistic. Thomas Schelling was the first to devise a rational means by which states can threaten nuclear-armed opponents.39 He argued that leaders cannot credibly threaten to intentionally launch a suicidal nuclear war, but they can make a ‘threat that leaves something to chance’. 40 They can engage in a process, the nuclear crisis, which increases the risk of nuclear war in an attempt to force a less resolved adversary to back down. As states escalate a nuclear crisis there is an **increasing probability that the conflict will spiral out of control** **and result in an inadvertent or accidental nuclear exchange**. As long as the benefit of winning the crisis is greater than the incremental increase in the risk of nuclear war, however, threats to escalate nuclear crises are inherently credible. In these games of nuclear brinkmanship, the state that is willing to run the greatest risk of nuclear war before backing down will win the crisis, as long as it does not end in catastrophe. It is for this reason that Thomas Schelling called great power politics in the nuclear era a ‘**competition in risk taking’**. 41 This does not mean that states eagerly bid up the risk of nuclear war. Rather, they face gut-wrenching decisions at each stage of the crisis. They can quit the crisis to avoid nuclear war, but only by ceding an important geopolitical issue to an opponent. Or they can the escalate the crisis in an attempt to prevail, but only at the risk of suffering a possible nuclear exchange. Since 1945 there were have been 20 high stakes nuclear crises in which ‘rational’ states like the United States run a frighteningly-real risk of nuclear war.42 By asking whether states can be deterred, therefore, proliferation optimists are **asking the wrong question**. The right question to ask is: what risk of nuclear war is a specific state willing to run against a particular opponent in a given crisis? Optimists are likely correct when they assert that a nuclear-armed Iran will not intentionally commit national suicide by launching a bolt-from-the-blue nuclear attack on the United States or Israel. This does not mean that Iran will never use nuclear weapons, however. Indeed, it is almost inconceivable to think that a nuclear-armed Iran would not, at some point, find itself in a crisis with another nuclear-armed power. It is also inconceivable that in those circumstances, Iran would not be willing to run some risk of nuclear war in order to achieve its objectives. If a nuclear-armed Iran and the United States or Israel were to have a geopolitical conflict in the future, over the internal politics of Syria, an Israeli conflict with Iran’s client Hizballah, the US presence in the Persian Gulf, shipping through the Strait of Hormuz, or some other issue, do we believe that Iran would immediately capitulate? Or is it possible that Iran would push back, possibly brandishing nuclear weapons in an attempt to coerce its adversaries? If the latter, there is a risk that proliferation to Iran could result in nuclear war and proliferation optimists are wrong to dismiss it out of hand. An optimist might counter that nuclear weapons will never be used, even in a crisis situation, because states have such a strong incentive, namely national survival, to ensure that nuclear weapons are not used. But this objection ignores the fact that leaders operate under competing pressures. Leaders in nuclear-armed states also have strong incentives to convince their adversaries that nuclear weapons might be used. Historically we have seen that leaders take actions in crises, such as **placing nuclear weapons on high alert** and **delegating nuclear launch authority to low-level commanders**, to **purposely increase the risk of nuclear war** in an attempt to force less-resolved opponents to back down. Moreover, not even the optimists’ first principles about the irrelevance of nuclear posture stand up to scrutiny. Not all nuclear wars would be equally devastating.43 Any nuclear exchange would have devastating consequences no doubt, but, if a crisis were to spiral out of control and result in nuclear war, any sane leader would rather face a country with five nuclear weapons than one with 5,000. Similarly, any sane leader would be willing to run a greater risk of nuclear war against the former state than against the latter. Indeed, scholars have demonstrated that states are willing to run greater risks and are, therefore, more likely to win nuclear crises when they enjoy nuclear superiority over their opponents.44 Proliferation optimists might be correct that no rational leader would choose to launch a suicidal nuclear war, but, depending on the context, **any sane leader would almost certainly be willing to risk one**. Nuclear deterrence theorists have also proposed a second scenario under which rational leaders would be willing to instigate a nuclear exchange: limited nuclear war.45 For example, by launching a single nuclear weapon against a small city, a nuclear-armed state could signal its willingness to escalate a crisis, while leaving its adversary with enough left to lose to deter the adversary from launching a full-scale nuclear response. In a future crisis between China and the United States, for example, China could choose to launch a nuclear strike on a US military base in East Asia to demonstrate its seriousness. In that situation, with the continental United States intact, would Washington choose to launch a full-scale nuclear war on China that could result in the destruction of many American cities? Or would it back down? China might decide to strike after calculating that Washington would prefer a humiliating retreat over a full-scale nuclear war. If launching a limited nuclear war could be a rational strategic move under certain circumstances, it then follows that **the spread of nuclear weapons increases the risk of nuclear use**. To be sure, some strategic thinkers, including Henry Kissinger, advocated limited nuclear war as a viable strategy only to recant the position later due to fears of uncontrollable escalation. Yet, this does not change the fact that leading nuclear deterrence theorists maintain that limited nuclear war is possible among rational leaders in a MAD world.46

#### Even a small nuclear war causes extinction and destroys the ozone

Starr, ’14 Steven Starr, the Senior Scientist for Physicians for Social Responsibility and Director of the Clinical Laboratory Science Program at the University of Missouri. Starr has published in the Bulletin of the Atomic Scientists and the Strategic Arms Reduction (STAR) website of the Moscow Institute of Physics and Technology, June 11th, 2014, “There Can be No Winners in a Nuclear War”, Truth Out, <https://truthout.org/articles/there-can-be-no-winners-in-a-nuclear-war/>, EO

Nuclear war has no winner. Beginning in 2006, several of the world’s leading climatologists (at Rutgers, UCLA, John Hopkins University, and the University of Colorado-Boulder) published a series of studies that evaluated the long-term environmental consequences of a nuclear war, including baseline scenarios fought with merely 1% of the explosive power in the US and/or Russian launch-ready nuclear arsenals. They concluded that the consequences of even a “small” nuclear war would include catastrophic disruptions of global climate and massive destruction of Earth’s protective ozone layer. These and more recent studies predict that global agriculture would be so negatively affected by such a war, a global famine would result, which would cause up to 2 billion people to starve to death. These peer-reviewed studies – which were analyzed by the best scientists in the world and found to be without error – also predict that a war fought with less than half of US or Russian strategic nuclear weapons would destroy the human race. In other words, a US-Russian nuclear war would create such extreme long-term damage to the global environment that it would leave the Earth uninhabitable for humans and most animal forms of life. A recent article in the Bulletin of the Atomic Scientists, “Self-assured destruction: The climate impacts of nuclear war,” begins by stating: “A nuclear war between Russia and the United States, even after the arsenal reductions planned under New START, could produce a nuclear winter. Hence, an attack by either side could be suicidal, resulting in self-assured destruction.” In 2009, I wrote “Catastrophic Climatic Consequences of Nuclear Conflicts” for the International Commission on Nuclear Non-proliferation and Disarmament. The article summarizes the findings of these studies. It explains that nuclear firestorms would produce millions of tons of smoke, which would rise above cloud level and form a global stratospheric smoke layer that would rapidly encircle the Earth. The smoke layer would remain for at least a decade, and it would act to destroy the protective ozone layer (vastly increasing the UV-B reaching Earth) as well as block warming sunlight, thus creating Ice Age weather conditions that would last 10 years or longer. Following a US-Russian nuclear war, temperatures in the central US and Eurasia would fall below freezing every day for one to three years; the intense cold would completely eliminate growing seasons for a decade or longer. No crops could be grown, leading to a famine that would kill most humans and large animal populations. Electromagnetic pulse from high-altitude nuclear detonations would destroy the integrated circuits in all modern electronic devices, including those in commercial nuclear power plants. Every nuclear reactor would almost instantly meltdown; every nuclear spent fuel pool (which contain many times more radioactivity than found in the reactors) would boil off, releasing vast amounts of long-lived radioactivity. The fallout would make most of the US and Europe uninhabitable. Of course, the survivors of the nuclear war would be starving to death anyway. Once nuclear weapons were introduced into a US-Russian conflict, there would be little chance that a nuclear holocaust could be avoided. Theories of “limited nuclear war” and “nuclear de-escalation” are unrealistic. In 2002 the Bush administration modified US strategic doctrine from a retaliatory role to permit preemptive nuclear attack; in 2010, the Obama administration made only incremental and miniscule changes to this doctrine, leaving it essentially unchanged. Furthermore, Counterforce doctrine – used by both the US and Russian military – emphasizes the need for preemptive strikes once nuclear war begins. Both sides would be under immense pressure to launch a preemptive nuclear first-strike once military hostilities had commenced, especially if nuclear weapons had already been used on the battlefield. Both the US and Russia each have 400 to 500 launch-ready ballistic missiles armed with a total of at least 1800 strategic nuclear warheads, which can be launched with only a few minutes warning. Both the US and Russian Presidents are accompanied 24/7 by military officers carrying a “nuclear briefcase,” which allows them to transmit the permission order to launch in a matter of seconds. Yet top political leaders and policymakers of both the US and Russia seem to be unaware that their launch-ready nuclear weapons represent a self-destruct mechanism for the human race. For example, in 2010, I was able to publicly question the chief negotiators of the New START treaty, Russian Ambassador Anatoly Antonov and (then) US Assistant Secretary of State Rose Gottemoeller, during their joint briefing at the UN (during the Non-Proliferation Treaty Review Conference). I asked them if they were familiar with the recent peer-reviewed studies that predicted the detonation of less than 1% of the explosive power contained in the operational and deployed US and Russian nuclear forces would cause catastrophic changes in the global climate, and that a nuclear war fought with their strategic nuclear weapons would kill most people on Earth. They both answered “no.” More recently, on April 20, 2014, I asked the same question and received the same answer from the US officials sent to brief representatives of the NGOS at the Non-Proliferation Treaty Preparatory Committee meeting at the UN. None of the US officials at the briefing were aware of the studies. Those present included top officials of the National Security Council. It is frightening that President Obama and his administration appear unaware that the world’s leading scientists have for years predicted that a nuclear war fought with the US and/or Russian strategic nuclear arsenal means the end of human history. Do they not know of the existential threat these arsenals pose to the human race . . . or do they choose to remain silent because this fact doesn’t fit into their official narratives? We hear only about terrorist threats that could destroy a city with an atomic bomb, while the threat of human extinction from nuclear war is never mentioned – even when the US and Russia are each running huge nuclear war games in preparation for a US-Russian war. Even more frightening is the fact that the neocons running US foreign policy believe that the US has “nuclear primacy” over Russia; that is, the US could successfully launch a nuclear sneak attack against Russian (and Chinese) nuclear forces and completely destroy them. This theory was articulated in 2006 in “The Rise of U.S. Nuclear Primacy,” which was published in Foreign Affairs by the Council on Foreign Relations. By concluding that the Russians and Chinese would be unable to retaliate, or if some small part of their forces remained, would not risk a second US attack by retaliating, the article invites nuclear war. Colonel Valery Yarynich (who was in charge of security of the Soviet/Russian nuclear command and control systems for 7 years) asked me to help him write a rebuttal, which was titled “Nuclear Primacy is a Fallacy.” Colonel Yarynich, who was on the Soviet General Staff and did war planning for the USSR, concluded that the “Primacy” article used faulty methodology and erroneous assumptions, thus invalidating its conclusions. My contribution lay in my knowledge of the recently published (in 2006) studies, which predicted even a “successful” nuclear first-strike, which destroyed 100% of the opposing side’s nuclear weapons, would cause the citizens of the side that “won” the nuclear war to perish from nuclear famine, just as would the rest of humanity.

# Case

## Adv 1

#### 1] ost is literally a meme nobody follows it which means at best you vote on the cp to clear up ambiguity and incentivize it to prevent conflict which solves their internal link on mallick ab no clarity

#### 2] Jamasmie 21 is about the artemeis accord which the us proposed – china and russia refused to sign – means the a) aff can’t solve because the us will always find loopholes and implement other treaties b) didn’t escalate when trump c) Russia and China say no, or the plan gets watered down.

**Bahney and Pearl 19** [Benjamin Bahney and Jonathan Pearl, 3-26-2019, "Why Creating a Space Force Changes Nothing," BENJAMIN BAHNEY and JONATHAN PEARL are Senior Fellows at the Lawrence Livermore National Laboratory’s Center for Global Security Research and contributing authors to [Cross Domain Deterrence: Strategy in an Era of Complexity](https://archive.md/o/Hlbi1/https:/www.amazon.com/Cross-Domain-Deterrence-Strategy-Era-Complexity/dp/0190908653). Foreign Affairs, [https://www.foreignaffairs.com/articles/space/2019-03-26/why-creating-space-force-changes-nothing accessed 12/10/21](https://www.foreignaffairs.com/articles/space/2019-03-26/why-creating-space-force-changes-nothing%20accessed%2012/10/21)] Adam

As Russia and China continue to push forward, U.S. policymakers may be tempted to use treaties and diplomacy to head off their efforts entirely. This option, although alluring on paper, is simply not feasible. Existing treaties designed to limit military competition in space have had little success in actually doing so. The 1967 Outer Space Treaty bans parties from placing nuclear weapons or other weapons of mass destruction in space, on the moon, or on other celestial bodies, but it has no formal mechanism for verifying compliance, and places no restrictions on the development or deployment in space of conventional antisatellite weapons. Even if it were possible to convince Moscow and Beijing of the benefits of comprehensive space arms control, existing technology makes it extremely difficult to verify compliance with the necessary treaty provisions—and without comprehensive and reliable verification, treaties are toothless. Moreover, regulating the development and deployment of antisatellite weapons is extremely difficult, both because they include such a broad and diverse range of technologies and because many types of antisatellite weapons can be concealed or explained away as having some other use. Unsurprisingly, Russia and China’s draft Treaty on the Prevention of Placement of Weapons in Space, which they have been pushing for several years now, has an unenforceable definition of what constitutes a “weapon” and does nothing at all to address ground-based antisatellite weapons development.

#### 3] Funnell 18 is from four years ago but there’s still no conflict – means have a very very high threshold and make them do the probability calculus – otherwise you err neg on presumption. independently nothing in the 1ac highlights a warrant / scenario for countries to go to war

#### 4] No ‘space war’ – Insurmountable barriers and everyone has an interest in keeping space peaceful

**Dobos 19** [(Bohumil Doboš, scholar at the Institute of Political Studies, Faculty of Social Sciences, Charles University in Prague, Czech Republic, and a coordinator of the Geopolitical Studies Research Centre) “Geopolitics of the Outer Space, Chapter 3: Outer Space as a Military-Diplomatic Field,” Pgs. 48-49] TDI

Despite the theorized potential for the achievement of the terrestrial dominance throughout the utilization of the ultimate high ground and the ease of destruction of space-based assets by the potential space weaponry, the utilization of space weapons is with current technology and no effective means to protect them far from fulfilling this potential (Steinberg 2012, p. 255). In current global international political and technological setting, the utility of space weapons is very limited, even if we accept that the ultimate high ground presents the potential to get a decisive tangible military advantage (which is unclear). This stands among the reasons for the lack of their utilization so far. Last but not the least, it must be pointed out that the states also develop passive defense systems designed to protect the satellites on orbit or critical capabilities they provide. These further decrease the utility of space weapons. These systems include larger maneuvering capacities, launching of decoys, preparation of spare satellites that are ready for launch in case of ASAT attack on its twin on orbit, or attempts to decrease the visibility of satellites using paint or materials less visible from radars (Moltz 2014, p. 31). Finally, we must look at the main obstacles of connection of the outer space and warfare. The first set of barriers is comprised of physical obstructions. As has been presented in the previous chapter, the outer space is very challenging domain to operate in. Environmental factors still present the largest threat to any space military capabilities if compared to any man-made threats (Rendleman 2013, p. 79). A following issue that hinders military operations in the outer space is the predictability of orbital movement. If the reconnaissance satellite's orbit is known, the terrestrial actor might attempt to hide some critical capabilities-an option that is countered by new surveillance techniques (spectrometers, etc.) (Norris 2010, p. 196)-but the hide-and-seek game is on. This same principle is, however, in place for any other space asset-any nation with basic tracking capabilities may quickly detect whether the military asset or weapon is located above its territory or on the other side of the planet and thus mitigate the possible strategic impact of space weapons not aiming at mass destruction. Another possibility is to attempt to destroy the weapon in orbit. Given the level of development for the ASAT technology, it seems that they will prevail over any possible weapon system for the time to come. Next issue, directly connected to the first one, is the utilization of weak physical protection of space objects that need to be as light as possible to reach the orbit and to be able to withstand harsh conditions of the domain. This means that their protection against ASAT weapons is very limited, and, whereas some avoidance techniques are being discussed, they are of limited use in case of ASAT attack. We can thus add to the issue of predictability also the issue of easy destructibility of space weapons and other military hardware (Dolman 2005, p. 40; Anantatmula 2013, p. 137; Steinberg 2012, p. 255). Even if the high ground was effectively achieved and other nations could not attack the space assets directly, there is still a need for communication with those assets from Earth. There are also ground facilities that support and control such weapons located on the surface. Electromagnetic communication with satellites might be jammed or hacked and the ground facilities infiltrated or destroyed thus rendering the possible space weapons useless (Klein 2006, p. 105; Rendleman 2013, p. 81). This issue might be overcome by the establishment of a base controlling these assets outside the Earth-on Moon or lunar orbit, at lunar L-points, etc.-but this perspective remains, for now, unrealistic. Furthermore, no contemporary actor will risk full space weaponization in the face of possible competition and the possibility of rendering the outer space useless. No actor is dominant enough to prevent others to challenge any possible attempts to dominate the domain by military means. To quote 2016 Stratfor analysis, "(a) war in space would be devastating to all, and preventing it, rather than finding ways to fight it, will likely remain the goal" (Larnrani 20 16). This stands true unless some space actor finds a utility in disrupting the arena for others.

#### 5] Space systems are distributed and resilient – states know that and won’t jump straight to the nuclear rung of the escalation ladder

Zack Cooper 18, Senior Fellow for Asian Security at the Center for Strategic and International Studies, and Thomas G. Roberts, Research Assistant and Program Coordinator for the Aerospace Security Project at CSIS, “DETERRENCE IN THE LAST SANCTUARY”, War on the Rocks, 1/2/2018, https://warontherocks.com/2018/01/deterrence-last-sanctuary/

Until recently, resilience in space was largely an afterthought. It was assumed that a conflict in space would likely lead to or precede a major nuclear exchange. Therefore, the focus was on cost-effective architectures that maximized satellite capabilities, often at the cost of resilience. Recently, however, some have hoped that new architectures could enhance resilience and prevent critical military operations from being significantly impeded in an attack. Although resilience can be expensive, American investments in smaller satellites and more distributed space architectures could minimize adversary incentives to carry out first strikes in space. In the late 20th century, minor escalations against space systems were treated as major events, since they typically threatened the superpowers’ nuclear architectures. Today, the proliferation of counter-space capabilities and the wide array of possible types of attacks means that most attacks against U.S. space systems are unlikely to warrant a nuclear response. It is critical that policymakers understand the likely break points in any conflict involving space systems. Strategists should explore whether the characteristics of different types of attacks against space systems create different thresholds, paying particular attention to attribution, reversibility, the defender’s awareness of an attack, the attacker’s ability to assess an attack’s effectiveness, and the risks of collateral damage (e.g., orbital debris). Competitors may attempt to use non-kinetic weapons and reversible actions to stay below the threshold that would trigger a strong U.S. response. The 2017 National Security Strategy warns: Any harmful interference with or an attack upon critical components of our space architecture that directly affects this vital U.S. interest will be met with a deliberate response at a time, place, manner, and domain of our choosing. In order to fulfill this promise, the United States will want to ensure that it has capabilities to respond both above and below various thresholds to ensure a full-spectrum of deterrence options for the full range of potential actors.

No terminal impact to space monopolization bad!

## Adv 2

#### Scenario 1–

#### 1] Riederer 14 from the advantage one non-unqs all their links – if it’s not even possible to mine then obviously there’s no way to conduct astroterror

#### 2] They massively miscut the Drmola 15 evidence – we’ll read blue

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>

There are two basic ways to go about moving the resources contained within a given asteroid to the Earth. They can be extracted from the asteroid during its natural orbit and then transported to the Earth, or the entire asteroid might be moved closer to a more convenient location before starting mining. Thus repositioned, it might even be used as a shielded habitat, once hollowed out (Ostro 1999). There are different speculative costs and benefits associated with either option, which would vary with the size, orbit and composition of the asteroid. But, crucially, the second option would entail putting asteroids into orbit around the Earth, the Moon or possibly at one of the Earth’s Lagrangian points. Indeed, NASA has already planned a mission to capture a small asteroid and place it in a high cislunar orbit, where it would serve as a destination for future manned missions and experiments. This “Asteroid Redirect Mission” is to take place in the next decade and is being pitched mainly as a stepping stone towards a future mission to Mars (see box “NASA’s Asteroid Redirect Mission”; Brophy et al. 2012, Burchell 2014, Gates et al. 2015). Programmes to redirect asteroids and, especially, plans to mine asteroids on an industrial scale essentially resurrect the deflection dilemma. But it is no longer a matter of superpowers intentionally misusing technology designed to prevent dangerous impacts. It becomes an issue of proliferation among private entities. Once private mining companies acquire the technical ability to redirect suitable NEOs (Baoyin et al. 2011) in order to extract platinum or water from them, perilous inflections become more likely. The probability of accidents will rise with the number of asteroids whose trajectories we decide to manipulate.

#### 3] This means there’s no internal link – if we win that asteroids won’t be de-orbited then there’s no reason to vote off of this advantage.

#### 4] near earth asteroids solve!

Carter 21, Jamie Carter, 10-19-2021, "Space Mining: Scientists Discover Two Asteroids Whose Precious Metals Would Exceed Global Reserves," Forbes, <https://www.forbes.com/sites/jamiecartereurope/2021/10/19/the-age-of-space-mining-just-got-closer-as-scientists-discover-two-asteroids-whose-precious-metals-would-exceed-global-reserves/?sh=1f3c202c713b> //tanya

Space Mining: Scientists Discover Two Asteroids Whose Precious Metals Would Exceed Global Reserves. We know the age of private space travel is here, but what about the wider commercial space industry? “[Space mining” has been talked-up in recent years](https://www.forbes.com/sites/brucedorminey/2021/08/31/does-commercial-asteroid-mining-still-have-a-future), but the hype-cycle has peaked with the realization that the technology to fetch rare-Earth metals from distant asteroids is some way off. Now researchers have uncovered two metal-rich near-Earth asteroids (NEAs) that could one day be mined for iron, nickel and cobalt could for use on Earth or in space. “Our analysis shows that both NEAs have surfaces with 85% metal such as iron and nickel and 15% silicate material, which is basically rock,” said lead author Juan Sanchez, who is based at the Planetary Science Institute in Arizona. “These asteroids are similar to some stony-iron meteorites such as mesosiderites found on Earth ... it is rewarding that we have discovered these “mini Psyches” so close to the Earth.”

#### 5] And it’s feasible – our ev postates theirs

Ho 21, Kenny L. Ho, 6-2021, "THE TECHNOLOGICAL AND ECONOMIC FEASIBILITY OF ASTEROID MINING," No Publication, <https://calhoun.nps.edu/handle/10945/67738> //tanya

Asteroid mining will be technologically feasible in the near future. Three successful asteroid sample return missions from two different countries have already been conducted: Japan’s Hayabusa 1 at 25143 Itokawa, Hayabusa 2 at 162173 Ryugu, and the United States’ OSIRIS-REx at 101955 Bennu. Spacefaring nations have demonstrated the ability to travel to, characterize, safely land on, and collect from the surface of a NEA and safely return the asteroid sample back to Earth. Therefore, the question is not, “Will asteroid mining ever be feasible?” Instead, a better question should be, “What key development should governments and companies prioritize in order to accelerate technical feasibility?” The answer to this also improves the chances of a profitable asteroid mining architecture. The key development that governments and commercial industries should focus on is perfecting the manufacturing of water not only on the Moon but also on NEAs. Refining the manufacturing of water in space will enable future sample return mission to collect much needed water for life support, shielding, and propellant. As McKay and Allen have demonstrated, producing water “from lunar materials is now a reality.”262 Yields are predictable and the water-producing reactions occur on the order of tens of minutes.263 Identifying the potential of lunar soil for the production of water can be determined from orbit.264 However, just because their findings are a reality does not mean that the technology is ready to be used in an actual space architecture. McKay and Allen’s findings illustrate that manufacturing water on the Moon is the closest next tangible technology that needs to be refined. This is because it will provide the highest chances of creating a profitable asteroid mining architecture, detailed in the next subsection, “Economic Benefit and Feasibility.”

#### 6] Mining is key to solving climate change

Duran 21, Paloma Duran, 11-3-2021, "Is Space Mining the Best Option to Face Climate Change?," Mexico Business, <https://mexicobusiness.news/mining/news/space-mining-best-option-face-climate-change> //tanya

Is Space Mining the Best Option to Face Climate Change? Going to net zero means that more mining is needed. Experts have said that the current supply cannot support the necessary metals demand for the green transition. As a result, new mining alternatives have gained greater relevance, among them is space mining. Several countries, including Mexico, have shown their interest in this alternative, creating a new space race. “The solar system can support a billion times greater industry than we have on Earth. When you go to vastly larger scales of civilization, beyond the scale that a planet can support, then the types of things that civilization can do are incomprehensible to us … We would be able to promote healthy societies all over the world at the same time that we would be reducing the environmental burden on the Earth,” said Dr. Phil Metzger, Planetary Scientist at the University of Central Florida. Currently, there are several attempts to address global warming and transition to a net zero carbon economy. There has been an increasing interest in renewable energy and infrastructure, which has increased demand for various minerals, especially lithium, cobalt, nickel, copper and rare earth elements. However, according to experts, the world is close to entering a metals supercycle, where demand will exceed available supply, causing prices to skyrocket. Consequently, the mining industry has sought alternatives to achieve the required supply. Options include recycling and improved mine waste management, sea mining and space mining. The latter is considered one of the alternatives with the greatest potential. According to a study from the Space Policy Journal, The use of extraterrestrial resources to facilitate space science and exploration, there have been important advances in the field of robots and nanotechnology, which would allow a closed supply chain through the use of self-replicating robots in a few decades. “Asteroid mining will be one of the means through which humanity expands into space. Saving planet Earth could very well happen as a result, but only in the long run. Between growing demand, the danger posed by climate change and the possible need to look off-world for human survival, asteroid mining may be an inevitability. In other words, it is not a question of can we or should we, but when will we?” said Matthew S. Williams, Author and Writer for Universe Today and the curator of the publication’s Guide to Space section.

#### 7] Warming turns nuclear war and death spirals make resilience impossible.

Beard et al. 21 [S.J. Beard, Lauren Holt, Asaf Tzachor, Luke Kemp, Shahar Avin, Phil Torres, and Haydn Belfield, \* Centre for the Study of Existential Risk, “Assessing climate change’s contribution to global catastrophic risk,” 2021, *Futures*, Vol. 127, https://doi.org/10.1016/j.futures.2020.102673, Table 1 & Fig. 2 Omitted]

3.1. Climate change and planetary boundaries While most of the impacts of climate change so far have fallen within the range of what was experienced during the Holocene, the rate of change is faster than in the Holocene and we are now beginning to see climate change push beyond these boundaries. In the latest edition of the planetary boundaries’ framework, climate change is placed in the zone of increasing risk, implying that while this boundary has been breached, there remains some potential for normal functioning and recovery (Steffen et al., 2015). It thus lies between what the authors identify as the ‘safe zone’ and other ‘high risk’ transgressions, such as disruption to the biochemical flows of nitrogen and phosphorus and loss of biosphere integrity. As part of their discussion of BRIHN Baum and Handoh (2014) note that climate change is the planetary boundary for which the risk to humanity has received most meaningful consideration and they suggest that this attention is deserved. Yet little research attention has been paid to climate change’s extreme or catastrophic effects. Kareiva and Carranza (2018) argue that, despite currently falling outside of the area of high risk, climate change has the clear potential to push humanity across a threshold of irreversible loss by “changing major ocean circulation patterns, causing massive sea-level rise, and increasing the frequency and severity of extreme events… that displace people, and ruin economies.” Even if humanity was resilient to each of these individual impacts, a global catastrophe could occur if these impacts were to occur rapidly and simultaneously. One scenario that has received comparatively more attention is that of the global climate crossing a tipping point that would trigger environmental feedback loops (such as declining albedo from melting ice or the release of methane from clathrates) and cascading effects (such a shifting rainfall patterns that trigger desertification and soil erosion). After this point, anthropogenic activity may cease to be the main driver of climate change, making it accelerate and become harder to stop (King et al., 2015). Other scenarios can be discerned from the numerous historical cases in which the modest, usually regional, climatic changes experienced during the Holocene have been implicated in the collapse of previous societies, including the Anasazi, the Tiwanaku, the Akkadians, the Western Roman Empire, the lowland Maya, and dozens of others (Diamond, 2005, Fagan, 2008). These provide a precedent for how a changing climate can trigger or contribute to societal breakdown. At present, our understanding of this phenomena is limited, and the IPCC has labelled its findings as “low confidence” due to a lack of understanding of cause and effect and restrictions in historical data (Klein et al., 2014). Further study and cooperation between archaeologists, historians, climate scientists and global catastrophic risk scholars could overcome some of these limitations by identifying how the impacts of climate change translate into social transformation and collapse, and hence what the impacts of more rapid and extreme climatic changes might be. There is also the potential for larger studies into how global climate variations have coincided with collapse and violence at the regional level (Zhang, Chiyung, Chusheng, Yuanqing, & Fung, 2005; Zhang et al., 2006). However, these need to be interpreted and generalized with care given the differences between pre-industrial and modern societies. Societies also have a long history of adapting to, and recovering from, climate change induced collapses (McAnany and Yoffee, 2009). However, there are two reasons to be skeptical that such resilience can be easily extrapolated into the future. First, the relatively stable context of the Holocene, with well-functioning, resilient ecosystems, has greatly assisted recovery, while anthropogenic climate change is more rapid, pervasive, global, and severe. Large-scale states did not emerge until the onset of the Holocene (Richerson, Boyd, & Bettinger, 2001), and societies have since remained in a surprisingly narrow climatic niche of roughly 15 mean annual average temperature (Xu, Kohler, Lenton, Svenning, & Scheffer, 2020). A return to agrarian or hunter-gatherer lifestyles could thus have more devastating and long-lasting effects in a world of rapid climate change and ecological disruption (Gowdy, 2020).7 Second, modern human societies may have developed hidden fragilities that amplify the shocks posed by climate change (Mannheim 2020) and the complex, tightly-coupled and interdependent nature of our socio-economic systems makes it more likely that the failure of a few key states or industries due to climate change could cascade into a global

#### Scenario 2 –

#### 1] no solvency, public sector thumps

#### 2] No debris cascades—This ev answers all aff warrants

Fange 2017 (Daniel Von Fange, Web Application Engineer, Founder and Owner of LeanCoder, Full Stack, Polyglot Web Developer, “Kessler Syndrome is Over Hyped”, 5/21/2017, http://braino.org/essays/kessler\_syndrome\_is\_over\_hyped/)

Kessler Syndrome is overhyped. A chorus of online commenters great any news of upcoming low earth orbit satellites with worry that humanity will to lose access to space. I now think they are wrong. What is Kessler Syndrome? Here’s the popular view on Kessler Syndrome. Every once in a while, a piece of junk in space hits a satellite. This single impact destroys the satellite, and breaks off several thousand additional pieces. These new pieces now fly around space looking for other satellites to hit, and so exponentially multiply themselves over time, like a nuclear reaction, until a sphere of man-made debris surrounds the earth, and humanity no longer has access to space nor the benefits of satellites. It is a dark picture. Is Kessler Syndrome likely to happen? I had to stop everything and spend an afternoon doing back-of-the-napkin math to know how big the threat is. To estimate, we need to know where the stuff in space is, how much mass is there, and how long it would take to deorbit. The orbital area around earth can be broken down into four regions. Low LEO - Up to about 400km. Things that orbit here burn up in the earth’s atmosphere quickly - between a few months to two years. The space station operates at the high end of this range. It loses about a kilometer of altitude a month and if not pushed higher every few months, would soon burn up. For all practical purposes, Low LEO doesn’t matter for Kessler Syndrome. If Low LEO was ever full of space junk, we’d just wait a year and a half, and the problem would be over. High LEO - 400km to 2000km. This where most heavy satellites and most space junk orbits. The air is thin enough here that satellites only go down slowly, and they have a much farther distance to fall. It can take 50 years for stuff here to get down. This is where Kessler Syndrome could be an issue. Mid Orbit - GPS satellites and other navigation satellites travel here in lonely, long lives. The volume of space is so huge, and the number of satellites so few, that we don’t need to worry about Kessler here. GEO - If you put a satellite far enough out from earth, the speed that the satellite travels around the earth will match the speed of the surface of the earth rotating under it. From the ground, the satellite will appear to hang motionless. Usually the geostationary orbit is used by big weather satellites and big TV broadcasting satellites. (This apparent motionlessness is why satellite TV dishes can be mounted pointing in a fixed direction. You can find approximate south just by looking around at the dishes in your northern hemisphere neighborhood.) For Kessler purposes, GEO orbit is roughly a ring 384,400 km around. However, all the satellites here are moving the same direction at the same speed - debris doesn’t get free velocity from the speed of the satellites. Also, it’s quite expensive to get a satellite here, and so there aren’t many, only about one satellite per 1000km of the ring. Kessler is not a problem here. How bad could Kessler Syndrome in High LEO be?Let’s imagine a worst case scenario. An evil alien intelligence chops up everything in High LEO, turning it into 1cm cubes of death orbiting at 1000km, spread as evenly across the surface of this sphere as orbital mechanics would allow. Is humanity cut off from space? I’m guessing the world has launched about 10,000 tons of satellites total. For guessing purposes, I’ll assume 2,500 tons of satellites and junk currently in High LEO. If satellites are made of aluminum, with a density of 2.70 g/cm3, then that’s 839,985,870 1cm cubes. A sphere for an orbit of 1,000km has a surface area of 682,752,000 square KM. So there would be one cube of junk per .81 square KM. If a rocket traveled through that, its odds of hitting that cube are tiny - less than 1 in 10,000. So even in the worst case, we don’t lose access to space. Now though you can travel through the debris, you couldn’t keep a satellite alive for long in this orbit of death. Kessler Syndrome at its worst just prevents us from putting satellites in certain orbits. 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.