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#### 1] The characterization of space as conflict-prone zone encourages the securitization of space – that hyperintensities conflict by driving arms races and increasing military investment

Peoples, 2011, aylor Francis, “The Securitization of Outer Space: Challenges for Arms Control”, Columba holds a BA in History, Politics and Social Studies from the University of Limerick, Ireland, and MScEcon & PhD qualifications in International Politics, URL: <https://www.tandfonline.com/doi/full/10.1080/13523260.2011.556846?scroll=top&needAccess=true>, KR

It is worth noting that the securitization of outer space – in terms of the identification of space with security – is, in itself, not a novel phenomenon or development. The extent to which ostensibly civil uses of outer space have been linked implicitly and explicitly to national security functions historically – or, as in the case of the space race between the United States and Soviet Union, have acted as a surrogate for direct military engagement – is well documented.50 Similarly, the characteriz- ation of the Sputnik launch in 1957 as placing the United States ‘in the greatest danger in its history’ suggests that the representation of space technologies as poten- tial existential threats is not entirely new either.51 What is of significance, though, is the intensification, expansion and entrenchment of securitizing moves as features of national space policies. The Space Security Index report Space Security 2009, in its overview of national policies, explicitly noted that, on the one hand, ‘National space policies consistently emphasize international cooperation and the peaceful uses of outer space’, but on the other hand that there is a ‘Growing focus within national policies on the security uses of outer space’.52 The report cited as evidence: Japan’s 2008 space law framework, which lifted its previous ban on national security and military space activities; China’s 2006 National Defense White Paper, which identifies national security as principle of China’s emerging space programme; France’s White Paper on Defense and National Security, which calls for an overhaul of its national space strategy; and the renewed priority on ‘space for security’ within EU policy.53

Within recent United States space policy securitization has been most noticeably prevalent and institutionalized, which is significant given the continued preeminence of the United States as a space power. As is noted in one recent assessment, around 50 countries, intergovernmental consortia, and nongovernmental organizations have at least one satellite in space, ‘mostly for reasons that have more to do with economic performance and Earth monitoring than with military applications.’54 However, in spite of the increasing diversity of interests in space and the increased range of func- tions space-based technologies now fulfil, the United States defence budget still remains the single largest source of investment in space technologies. In part this sus- tained investment arises out of American deployment and development of missile defence systems. Space and missile defences have been intimately connected issues historically and there are obvious technological overlaps between the two. Missile defence systems, including the ground-based system (Ground-Based Mid- course Defence or GMD) currently deployed by the United States at sites in Alaska and California, are dependent on satellite and space-based tracking technol- ogies to detect and track incoming missiles, and there is a possibility that the future connection between missile defence and space will be even stronger if current plans for missile defence are pursued to their fullest extent. Two such systems are already in the early stage of their development: the Space-Based Laser (SBL), which, like the Strategic Defence Initiative or Star Wars proposals of the 1980s, envisages using lasers to shoot down missiles in flight;55 and the ‘NFIRE’ or Near Field Infrared Experiment, a proposal to launch interceptor missiles not from the ground, as in the currently deployed GMD, but from space.56

Even if the developmental status of space-based missile defence interceptors remains uncertain (not least due to the budgetary constraints involved), the currently deployed ground-based system also poses a complex issue in terms of arms control. Though ostensibly intended for defensive purposes, ground and sea-based com- ponents of American missile defence could theoretically be employed as an ASAT – Anti-Satellite attack – device, and the use of sea-based Aegis ballistic missile defence capabilities and its Standard Missile 3 (SM3) to shoot down the malfunction- ing USA-193 spy satellite in February 2008 has done little to dispel concerns over the offensive applications of current missile defence capabilities.57 In addition, the United States also conducts research into more exotic forms of space weaponry, and funds a variety of technologies aimed at creating a force application capacity from space. The Department of Defense has reportedly explored several high- concept space weapons systems such as Hypervelocity Rod Bundles (tungsten rods dropped on targets from space that would theoretically use gravity as accelerant in a manner akin to a meteor, or Rods from God as they are also colloquially known), the Experimental Spacecraft System (XSS) (a manoeuvrable microsatellite weighing only 100 kilograms which could prospectively be used to attack other satellites), and the Common Aerospace Vehicle or CAV (this so-called Spaceplane would be unmanned and would orbit the earth, entering the atmosphere when needed to deploy precision guided munitions against selected targets). 58

Such programmes with possible space weapons applications (beyond ground-to- space ASAT capabilities) are still in their relative infancy, and the technical prospects for such technologies, as with the more exotic missile defence proposals outlined above, are far from certain.59 Yet much of the rhetoric emanating from the United States in recent years has made expansive claims to space dominance far beyond existing capabilities. In short, rather than seeking to control the means of violence in and from space, much of the military discourse on space has generally cast the United States as a trailblazer in this regard, with exotic systems cited as a necessity for future military dominance in and from space.60 Historically these claims have tended to emanate primarily from the Air Force and Air Force Space Command. In 1998, Space Command defined the control of space (‘space control’) as ‘The ability to assure access to space, freedom of operations within the space medium, and an ability to deny others use of space, if required’61, and space was also con- sidered as part of the remit for ‘full spectrum dominance’ in Joint Vision 2020.62 Space warriors within and beyond the United States military also make frequent reference to the ‘. . .importance of dominating space in peace and war’.63

Yet, ‘The decision to weaponize space does not lie within the military (seeking short-term military advantage in support of national security) but at the higher- level of national policy (seeking long-term national security, economic well-being, and worldwide legitimacy of US constitutional values).’64 Instances of the securitiza- tion of outer space within military circles are hardly surprising, given vested interests and the perceived utility of space support for American forces; what is more signifi- cant though is the extent to which national policy, though stopping short of explicit advocating of space weapons, has tended to similarly maintain the centrality of space for national security. 65 As Moore’s ‘biography’ of the idea of unilateral space dom- inance in the United States attests to, this school of thought has long held a prominent place in American strategic circles.66 Of significance, though, is the extent to which this type of thinking has migrated into official policy, portraying American access to, and dominance of, outer space as key to national survival in the process. The tenure of the George W. Bush administration in particular saw military and policy discourse move much closer in terms of goals and language used, entrenching securitization within United States space policy as a whole. In the terms used above, the views of space warriors made much greater inroads under the Bush administration, and this has had a significant bearing on how the United States has positioned itself in terms of arms control and how other states – particularly China and Russia – have subsequently defined their own positions.67

The evolution of official American discourse on outer space over the past decade attests to this subtle shift. In 2001, the Commission to Assess United States National Security Space Management and Organization (or Rumsfeld Space Commission as it is often referred to owing to Donald Rumsfeld’s position as chair) pointed out that a number of states hostile to the United States could attain ASAT capabilities, and, infamously, warned that if the United States did not secure space it would face a Space Pearl Harbor. Members of the Bush administration subsequently went on to effectively endorse the space control concept, asserting the primacy of space for security by openly linking its potential civil and military uses (and thus suggesting only a minimal distinction between the two). Then Deputy Secretary of Defense Paul Wolfowitz argued in a 2002 speech on missile defence that ‘as we look ahead we need to think about areas that would provide higher leverage. Nowhere is that more true than in space. Space offers attractive options not only for missile defense but for a broad range of interrelated civil and military missions. It truly is the ultimate highground.’68 The culmination of this line of thinking in policy terms came with the release of the National Space Policy (NSP) in August 2006, which stated that:

The United States considers space capabilities – including the ground and space segments and supporting links – vital to its national interests. Consistent with this policy, the United States will: preserve its rights, capabilities, and freedom of action in space; dissuade or deter others from either those rights or developing capabilities intended to so; take those actions necessary to protect its space capabilities; respond to interference; and deny, if necessary, adversaries the use of space capabilities hostile to US national interests.69

The framing of the arguments from those within the Bush administration thus clearly aligns with the dynamics of securitization as identified by Buzan et al. The idea of a Pearl Harbor from Space invokes the nightmare scenario of a surprise attack on American interests in or from space, and was accompanied in the Rumsfeld Commission’s report by the sense of urgency characteristic of securitizing moves: ‘the present extent of US dependence on space [and] the rapid pace at which this dependence is increasing and the vulnerabilities it creates, all demand that US national security space interests be recognized as a top national security priority’.70 The Pearl Harbor analogy implied a focus on a surprise attack itself, but the rest of the report stressed the radical implications of such an attack, suggesting a potential existential threat to American commerce, society and, ultimately, way of life. As the report noted, ‘Space enters homes, businesses, schools, hospitals and government offices through its applications for transportation, health, the environment, telecom- munications, education, agriculture and energy. Much like highways and airways, water lines and electric grids, services supplied from space are already an important part of the US and global infrastructures.’71

In turn, the NSP of 2006 repeated many of these same securitizing moves. It elev- ated national security functions of United States space policy, declaring these as vital to national interests, and national security as ‘critically dependent upon space capabilities... this dependence will grow.’ Similarly, the NSP described United States space systems as critical to ‘. . .a wide range of civil, commercial, and national security users’, identifying the wider security implications of space as well as its more direct military uses.72 Crucially, this securitization of space was then used to justify exceptional measures with regards to arms control and the previous era of multilateral space agreements. Among the ‘actions necessary’ to protect space capabilities the NSP declared that:

#### 2] Characterization of Russia and China as an ongoing threat – here’s a rehilighting

Rogin 11/30 [(Josh, a columnist for the Global Opinions section of The Washington Post. He writes about foreign policy and national security. Rogin is also a political analyst for CNN. He previously worked for Bloomberg View, the Daily Beast, Foreign Policy, Congressional Quarterly, Federal Computer Week and Japan's Asahi Shimbun newspaper.) “Opinion: A shadow war in space is heating up fast” Washington Post, 11/30/2021. https://www.washingtonpost.com/opinions/2021/11/30/space-race-china-david-thompson/] BC

When Russia blows up a satellite in space with a missile (as it did this month), or when China tests a new hypersonic missile (as it did last month), the ongoing arms race in space leaps into the news. But in between these “Sputnik”-like moments, outside the public’s view, the United States and its adversaries are battling in space every day.

While Washington officials and experts warn of the risks of an arms race in space, the United States’ adversaries are constantly conducting operations against U.S. satellites that skirt the line between intelligence operations and acts of war. The pace of conflict is intensifying, according to a top Space Force general, who told me that China could overtake the United States to become the number one power in space by the end of the decade.

“The threats are really growing and expanding every single day. And it’s really an evolution of activity that’s been happening for a long time,” Gen. David Thompson, the Space Force’s first vice chief of space operations, told me in an interview on the sidelines of the recent Halifax International Security Forum. “We’re really at a point now where there’s a whole host of ways that our space systems can be threatened.”

Right now, Space Force is dealing with what Thompson calls “reversible attacks” on U.S. government satellites (meaning attacks that don’t permanently damage the satellites) “every single day.” Both China and Russia are regularly attacking U.S. satellites with non-kinetic means, including lasers, radio frequency jammers and cyber attacks, he said.

Thompson repeatedly declined to comment on whether China or Russia has attacked a U.S. military satellite in a way that did permanent or significant damage, telling me that would be classified if it had happened. The Chinese military is quickly deploying ground-based systems for doing battle in space, such as lasers that can damage nosy U.S. intelligence community satellites, which could be considered an act of war.

“The Chinese are actually well ahead [of Russia],” Thompson said. “They're fielding operational systems at an incredible rate.”

Both the Russians and the Chinese are working on satellites that can attack other satellites, he said. For some time now there have been reports that China was developing a satellite that could claw another satellite or grab one with a robotic arm or a grappling hook. The Chinese government has several reasons to want to disable U.S. satellites, which have been useful in revealing concentration camps built to intern Uyghur Muslims and new Chinese nuclear missile silo fields.

In 2019, Russia deployed a small satellite into an orbit so close to a U.S. “national security satellite” that the U.S. government didn’t know whether it was attacking or not, Thompson said. Then, the Russian satellite backed away and conducted a weapons test. It released a small target and then shot it with a projectile.

“It maneuvered close, it maneuvered dangerously, it maneuvered threateningly so that they were coming close enough that there was a concern of collision,” he said. “So clearly, the Russians were sending us a message.”

China is building its own version of satellite-based global positioning systems, said Thompson. That’s in addition to the “couple of hundred” intelligence, surveillance and reconnaissance satellites China has now deployed to watch over any part of the globe. China is also putting satellites into space at twice the rate of the United States, meaning that if nothing changes on our end, China will surpass the United States in capability in space in a few years, he estimated.

“We are still the best in the world, clearly in terms of capability. They're catching up quickly,” he said. “We should be concerned by the end of this decade if we don't adapt.”

While China is quickly weaponizing space, its government points fingers at United States, claiming that Washington is the diplomatic stumbling black. There are reports that the Biden administration is reaching out to Beijing to establish new negotiations for a nuclear arms control, as well as international norms for cyberspace and space, but U.S. officials say that China won’t meaningfully engage.

The U.S. military is trying to speed up the procurement and deployment of space assets by creating structures like the Space Rapid Capabilities Office and the Space Development Agency, he said. Thompson’s idea is to deploy a large number of relatively low-cost satellites in constellations that increase the resiliency of U.S. space assets if they come under attack.

Conventional thinking about how to deter an enemy from attacking on the ground, by sea or in the air doesn’t really apply to space. New doctrines and norms for space need to be established, mostly by diplomats. That work will take years. Meanwhile, the arms race in space is heating up, and the United States risks losing it if it doesn’t recognize this reality.

#### Their security discourse causes genocide and interventionism in the name of cleansing the world of violent “others”

Friis 2k - Friis, UN Sector at the Norwegian Institute of International Affairs, 2k, (Karsten, Peace and Conflict Studies 7.2, “From Liminars to Others: Securitization Through Myths,” <http://shss.nova.edu/pcs/journalsPDF/V7N2.pdf#page=2>). NS

The problem with societal securitization is one of representation. It is rarely clear in advance who it is that speaks for a community. There is no system of representation as in a state. Since literately anyone can stand up as representatives, there is room for entrepreneurs. It is not surprising if we experience a struggle between different representatives and also their different representations of the society. What they do share, however, is a conviction that they are best at providing (a new) order. If they can do this convincingly, they gain legitimacy. What must be done is to make the uncertain certain and make the unknown an object of knowledge. To present a discernable Other is a way of doing this. The Other is represented as an Other -- as an unified single actor with a similar unquestionable set of core values (i.e. the capital “O”). They are objectified, made into an object of knowledge, by representation of their identity and values. In other words, the representation of the Other is depoliticized in the sense that its inner qualities are treated as given and non-negotiable. In Jef Huysmans (1998:241) words, there is both a need for a mediation of chaos as well as of threat. A mediation of chaos is more basic than a mediation of threat, as it implies making chaos into a meaningful order by a convincing representation of the Self and its surroundings. It is a mediation of “ontological security”, which means “...a strategy of managing the limits of reflexivity ... by fixing social relations into a symbolic and institutional order” (Huysmans 1998:242). As he and others (like Hansen 1998:240) have pointed out, the importance of a threat construction for political identification, is often overstated. The mediation of chaos, of being the provider of order in general, is just as important. This may imply naming an Other but not necessarily as a threat. Such a dichotomization implies a necessity to get rid of all the liminars (what Huysmans calls “strangers”). This is because they “...connote a challenge to categorizing practices through the impossibility of being categorized”, and does not threaten the community, “...but the possibility of ordering itself” (Huysmans 1998:241). They are a challenge to the entrepreneur by their very existence. They confuse the dichotomy of Self and Other and thereby the entrepreneur’s mediation of chaos. As mentioned, a liminar can for instance be people of mixed ethnical ancestry but also representations of competing world-pictures. As Eide (1998:76) notes: “Over and over again we see that the “liberals” within a group undergoing a mobilisation process for group conflict are the first ones to go”. The liminars threaten the ontological order of the entrepreneur by challenging his representation of Self and Other and his mediation of chaos, which ultimately undermines the legitimacy of his policy. The liminars may be securitized by some sort of disciplination, from suppression of cultural symbols to ethnic cleansing and expatriation. This is a threat to the ontological order of the entrepreneur, stemming from inside and thus repoliticizing the inside/outside dichotomy. Therefore the liminar must disappear. It must be made into a Self, as several minority groups throughout the world have experienced, or it must be forced out of the territory. A liminar may also become an Other, as its connection to the Self is cut and their former common culture is renounced and made insignificant. In Anne Norton’s (1988:55) words, “The presence of difference in the ambiguous other leads to its classification as wholly unlike and identifies it unqualifiedly with the archetypal other, denying the resemblance to the self.” Then the liminar is no longer an ontological danger (chaos), but what Huysmans (1998:242) calls a mediation of “daily security”. This is not challenging the order or the system as such but has become a visible, clear-cut Other. In places like Bosnia, this naming and replacement of an Other, has been regarded by the securitizing actors as the solution to the ontological problem they have posed. Securitization was not considered a political move, in the sense that there were any choices. It was a necessity: Securitization was a solution based on a depoliticized ontology.10 This way the world-picture of the securitizing actor is not only a representation but also made into reality. The mythical second-order language is made into first-order language, and its “innocent” reality is forced upon the world. To the entrepreneurs and other actors involved it has become a “natural” necessity with a need to make order, even if it implies making the world match the map. Maybe that is why war against liminars are so often total; it attempts a total expatriation or a total “solution” (like the Holocaust) and not only a victory on the battlefield. If the enemy is not even considered a legitimate Other, the door may be more open to a kind of violence that is way beyond any war conventions, any jus in bello. This way, securitizing is legitimized: The entrepreneur has succeeded both in launching his world-view and in prescribing the necessary measures taken against it. This is possible by using the myths, by speaking on behalf of the natural and eternal, where truth is never questioned.

#### The alternative is to reject securitization – this opens up space for emancipatory political engagement.

**Neocleous:** [Mark, Professor of the Critique of Political Economy; Head of Department of Politics & History Brunel Univ, Critique of Security, 185-6]

The only way out of such a dilemma, to escape the fetish, is perhaps to eschew the logic of securityaltogether **-** to reject it as so ideologically loaded in favour of the state that any real political thought other than the authoritarian and reactionary should be pressed to give it up. That is clearly something that can not be achieved within the limits of bourgeois thought and thus could never even begin to be imagined by the security intellectual. It is also something that the constant iteration of the refrain 'this is an insecure world'and reiteration of one fear**,** anxiety and insecurity after **another** will also make it hard to do**.** But it is something that the critique of security suggests we may have to consider if we want a political way out of the impasse of security. This impasse exists because security has now become so all-encompassing that it marginalises all else, most notably the constructive conflicts, debates and discussions that animate political life. The constant prioritising of a mythical security as a political end - as the political end constitutes a rejection of politics in any meaningful sense of the term. That is, as a mode of action in which differences can be articulated, in which the conflicts and struggles **t**hat arise from such differences can be fought for and negotiated, in which people might come to believe that another world is possible - that they might transform the world and in turn be transformed. Security politics simply removes this; worse, it remoeves it while purportedly addressing it. In so doing it suppresses all issues of power and turns political questions into debates about the most efficient way to achieve 'security', despite the fact that we are never quite told - never could be told - what might count as having achieved it. Security politics is, in this sense, an anti-politics,"' dominating political discourse in much the same manner as the security state tries to dominate human beings, reinforcing security fetishism and the monopolistic character ofsecurity on the political imagination. We therefore need to get beyond security politics, not add yet more 'sectors' to it in a way that simply expands the scope of the state and legitimises state intervention in yet more and more areas of our lives. Simon Dalby reports a personal communication with Michael Williams, co-editor of the important text Critical Security Studies, in which the latter asks: if you take away security, what do you put in the hole that's left behind? But I'm inclined to agree with Dalby: maybe there is no hole**."**' The mistake has been to think that there is a hole and that this hole needs to be filled with a new vision or revision of security in which it is re-mapped or civilised or gendered or humanised or expanded or whatever. All of these ultimately remain within the statist political imaginary, and consequently end up reaffirming the state as the terrain of modern politics, the grounds of security. The real task is not to fill the supposed hole with yet another vision of security, but to fight for an alternative political language which takes us beyond the narrow horizon of bourgeois security and which therefore does not constantly throw us into the arms of the state. That's the point of critical politics: to develop a new political language more adequate to the kind of society we want. Thus while much of what I have said here has been of a negative order, part of the tradition of critical theory is that the negative may be as significant as the positive in setting thought on new paths. For if security really is the supreme concept of bourgeois society and the fundamental thematic of liberalism, then to keep harping on about insecurity and to keep demanding 'more security' (while meekly hoping that this increased security doesn't damage our liberty) is to blind ourselves to the possibility of building real alternatives to the authoritarian tendencies in contemporary politics. To situate ourselves against security politics would allow us to circumvent the debilitating effect achieved through the constant securitising of social and political issues, debilitating in the sense that 'security' helps consolidate the power of the existing forms of social domination and justifies the short-circuiting of even the most democratic forms. It would also allow us to forge another kind of politics centred on a different conception of the good. We need a new way of thinking and talking about social being and politics that moves us beyond security. This would perhaps be emancipatory in the true sense of the word.What this might mean**,** precisely, must be open to debate. But it certainly requires recognising that security is an illusion that has forgotten it is an illusion; it requires recognising that security is not the same as solidarity; it requires accepting that insecurity is part of the human condition, and thus giving up the search for the certainty of security and instead learning to tolerate the uncertainties, ambiguities and 'insecurities' that come with being human; it requires accepting that 'securitizing' an issue does not mean dealing with it politically, but bracketing it out and handing it to the state;it requires us to be brave enough to return the gift."'

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#### China views resources in space as key to foreign policy iniatives

Blair, Yali, 19, 03/2019, “The Space Security Dilemma”, Bruce G. Blair is the President of the World Security Institute. He was a project director at the Congressional Office of Technology Assessment and a senior fellow in the Foreign Policy Studies Program at the Brookings Institution from 1987-2000. Mr. Blair is the author of numerous articles and books on security issues including the Logic of Accidental Nuclear War and Global Zero Alert for Nuclear Forces. He is presently completing a new book on U.S. nuclear policy.sChen Yali is the editor-in-chief of Washington Observer. She is also a Program Manager of Chen Shi China Research Group based in Beijing. Chen worked for China Daily as a reporter and opinion writer on politics and international affairs between 1994 and 2000, URL: <https://www.globalzero.org/wp-content/uploads/2019/03/BB_Editors-Notes-Space-Security-Dilemma_2006.pdf>, KR

A zero-sum mindset toward space is hardening in China as a result of this apprehension, as amply illustrated in the public media. Space is eyed in China as an area of resources and possibilities to be acquired before it’s too late. ShuXing, whose book is reviewed later in this journal, likens the grabbing of satellite orbits to the “Enclosure Movement” in late 18th Century England in which the more capability one has, the more resources one can seize. Another reviewed author argued that countries scramble into space to fight for the tremendous resources found there and “once this fight for resources causes irreconcilable conflicts, it may lead to radical space confrontations.” A space war seems to many Chinese to be another form of resource war. Such urgency in seeking control over resources is not unique to space, but also applies to energy and other areas. Given China’s population and rapid economic growth, controlling resources is understandably a paramount concern. Regarding space, however, a zero-sum (‘win-lose’) attitude is narrow-minded and misguided. If feverish competition for resources in space causes Sino-American relations to deteriorate or leads to the outbreak of war between them, then both parties lose.

Maj. Gen. Chang Xianqi and Sui Junqin of the PLA Institute of Command and Technology (aka. Armament Command and Technology Academy) offer a straightforward description of the aims of China’s space activities over the next five to 20 years, and explain why perceptions or accusations of hidden military aims in China’s manned space flight program (which sent two astronauts into space in October 2005) do not withstand logical scrutiny. They characterize the country’s space mission as dedicated to advancing science and to supporting China’s economic modernization. They dismiss two key allegations concerning the manned space program that the Shenzhou spacecraft’s ability for mid-course orbital maneuvering indicates a Chinese military effort to apply the technology to Chinese strategic missiles in order to give these missiles the ability to avoid U.S. missile defenses, and that China envisions its manned spacecraft as platforms for conducting real-time reconnaissance and intelligence collection for military ends. China’s orbital maneuver technology, they note, is decades old and evolved independently of the U.S. missile defense program, while the inefficiencies of conducting surveillance from manned platforms compared to satellites are widely appreciated and have led other space-faring nations to choose satellites for this mission.

#### The plan forces China to respond since they can’t pursue resources – that form of militarization creates arms control and escalation crises

Blair, Yali, 19, 03/2019, “The Space Security Dilemma”, Bruce G. Blair is the President of the World Security Institute. He was a project director at the Congressional Office of Technology Assessment and a senior fellow in the Foreign Policy Studies Program at the Brookings Institution from 1987-2000. Mr. Blair is the author of numerous articles and books on security issues including the Logic of Accidental Nuclear War and Global Zero Alert for Nuclear Forces. He is presently completing a new book on U.S. nuclear policy.sChen Yali is the editor-in-chief of Washington Observer. She is also a Program Manager of Chen Shi China Research Group based in Beijing. Chen worked for China Daily as a reporter and opinion writer on politics and international affairs between 1994 and 2000, URL: <https://www.globalzero.org/wp-content/uploads/2019/03/BB_Editors-Notes-Space-Security-Dilemma_2006.pdf>, KR

While the China space threat consists of a spectrum of possibilities, the U.S. space threat to China clearly goes beyond the realm of possibilities, Zhang Hui at Harvard University contends in his article that examines threats from a Chinese perspective. Drawing on authoritative sources, he argues that the United States is unambiguously committed not only to exploiting space for military purposes, but also to controlling space by all necessary means including weapons deployed in space. The objective is not only to protect U.S. space assets, but to deny adversaries the use of space in wartime. In its most ambitious rendition, controlling space applies even to the transitory period of several minutes when an adversary’s missiles are passing through space enroute to their wartime targets on enemy soil. This prospective role for U.S. space control weapons – shooting down an adversary’s ballistic missiles – is the central concern of Zhang’s analysis, as it represents the most serious threat to China’s security. A space-based U.S. missile defense system, especially one designed to shoot down ballistic missiles during their several minutes of boosted flight after launch (boost-phase defenses), would pose the gravest potential threat by enabling the United States to neutralize China’s strategic nuclear missile deterrent.

In some respects Zhang and many U.S. analysts understate the degree of potential threat to China by stressing the huge cost of the thousands of space- based interceptors needed to maintain an around-the-clock vigil of Chinese missile launches, and by stressing the relative ease by which China’s missiles could punch holes in this defensive constellation. The understatement derives from the fact that a far less extensive galaxy of U.S. space-based interceptors would be needed if the United States could choose the moment for initiating hostilities as part of a preemptive offensive strategy. Even a constellation of dozens of interceptors could be decisive if the United States enjoyed the luxury of setting the terms of the onset of conflict and the interceptors were optimally positioned at that moment.

In Zhang’s view, China could counter by deploying anti-space weapons designed to cripple the U.S. missile defense network, but such a step could ignite an arms race in space (and, we might add, create impulses to preemptively strike in space during a crisis). Alternatively, China could ramp up its arsenal of nuclear missiles and warheads to the point at which it would overwhelm the U.S. defense capability, but the downsides are numerous. A Chinese missile build-up could trigger nuclear reactions from India. If Pakistan follows suit, an arms race in South Asia could result. It could also require China to re-start its fissile materials production facilities and thereby unravel China’s commitment to the multinational treaty calling for all countries to stop future production of such materials.

#### Turns aff war impacts and hyper-escalate their conflict scenarios since other states have incentives to match China

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#### China ought to:

#### --Announce that appropriation of outer space by private actors in China violates the Outer Space Treaty and that this is a settled matter of customary international law

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

#### --Fully comply, not appropriating outer space in a manner inconsistent with these proclamations

#### Solves the Aff.

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

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

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

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

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

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

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

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

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

#### AND treaties are the foundation of space law.

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

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

#### We solve better, since CIL is far superior to treaties for space AND causes follow-on.

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

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

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

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

#### CIL is critical to solve climate change threats. Relying only on treaty commitments fails.

**Clark 18** (Kayla Clark is a lawyer at Morgan Lewis. Education: University of Notre Dame Law School, 2018, J.D. California Polytechnic State University, 2015, B.A. “The Paris Agreement: Its Role in International Law and American Jurisprudence”. 5-10-2018.)

Moreover, the long-term nature of the Paris Agreement has the additional benefit of potentially creating **c**ustomary **i**nternational **l**aw **regarding** international **environmental norms** and development. Customary international law, **recognized to be legally binding** on participating nations,65 **can** be shaped when a custom, such as a commitment to **consistently reduce** greenhouse gas **emissions**, becomes regarded as law. Evidence of customary international law can include: general acceptance by the participants; adherence for a sufficient duration; consistent understanding of the terms and stable enforcement; and a finding of opinio juris––evidence that the terms are seen as law.66 If it can be shown throughout the Paris Agreement’s implementation that the terms, including participants’ commitments and implementation of goals, transitioned from mere statutory obligations to **c**ustomary **i**nternational **l**aw, then the Paris Agreement **stands a credible chance at recognition beyond the limits of** the **treaty**’s **text.** The architecture of the Agreement, with an aspirational goals of temperature reduction and evaluation periods every five years beginning in 2023, leaves ample time for the already binding international treaty to take on another stable and well-recognized form—customary international law.67 In addition to the aspirational goals of the Paris Agreement, the nuanced form of differentiation between nations is a feature that positions the pact for success. The differentiation is meant to be both inclusive and empowering to all participants.68 Beginning with the preamble of the Agreement, “one finds in a condensed manner carefully crafted expressions of the main tensions underpinning the entire text, between developed and developing countries, between more vulnerable countries and the rest, between countries that expect to suffer from measures that ‘respond’ to climate change and the rest . . .”69 The Agreement is facilitated by each state voluntarily committing to reduce its emissions reductions. All states are asked to commit to some amount of emissions reduction, but no states are assigned a mandatory reductions target, as they were in Kyoto. **Under** Paris, “[s]tates thus choose their level of ambition subject to two requirements, namely the regular updating––at least every five years . . . and **a**n obligation of non-regression . . . .”70 The Paris Agreement’s **voluntary contribution scheme** seeks to diffuse the sharply divisive Annex 1 and non-Annex 1 strategy of the Kyoto Protocol, as well as reduce the coercive effect of mandatorily assigned targets. The Annex strategy not only excluded many developing countries, chief of which included high carbon emitters like China and India, but also disheartened developed countries that felt that even a good faith attempt at meeting their target emissions would make only a marginal impact on overall climate change efforts.71 Additionally, the distinction between Annex 1 and non-Annex 1 under the Kyoto Protocol restricted the ability or motivation of developing countries to reduce their greenhouse gas emissions, as they were not required to participate.72 Now, developing **countries like China or India cannot shirk participation merely because of their developing status**.73 The Paris Agreement reflects the principle of common but differentiated responsibilities, but implements this international law doctrine more effectively. Though all participating nations must voluntarily assume and be accountable for their emission reduction goals, accommodations for developing countries are also included. To offset the cost on now-included developing countries, the Paris Agreement incorporates adaptation by developing countries as a goal, and urges developed countries to provide developing states with financial and logistical support. Including mechanisms to support adaptation is a new way to address climate change, responsive to the reality that, as Vinuales writes, “[i]t may be that climate change is no longer a matter of precaution but one of prevention – preventing acknowledged risk.”74 Creating infrastructure and advancing technology in developing nations, via funding from developed nations, recognizes the different capacities of different countries, reflects the common but differentiated responsibilities doctrine, and focuses on adaptation. However, the Agreement still expects developing nations to contribute throughout the adaptation process. The third promising feature of the Paris Agreement is the innovative approach to oversight and enforcement. Compared to the Kyoto Protocol’s mandatory and legally-binding emissions reductions, the Paris Agreement takes a less coercive, information-based approach.75 Through the construction of **i**nternational **law**, the Paris Agreement hopes to use both official and unofficial sources of pressure in its information-based enforcement. As Falkner writes, the Paris Agreement **relies on a “two-level game” logic that unites domestic climate politics with strategic international interaction**.76 Though the Paris Agreement does not impute a legal obligation for states to actually reduce their emissions per their commitments, it does require periodic reports to be disclosed to the participants of the Agreement. These reports will occur every five years, beginning in 2023, and will provide the international community with a transparent look into the efforts of other states to combat climate change.77 The information garnered from these periodic reports, and their subsequent review, may facilitate the “naming and shaming” of states that have not succeeded in meeting their goals.78 **The peer pressure function should work effectively** between nations, as they may easily identify **and** call out those that have failed to make a good faith effort to meet their voluntary contributions. The mandatory reporting serves to make the Agreement transparent and legitimate to the international community.79 The naming and shaming also **anticipates pressure on the contributing parties from civil society**, as governments of underperforming countries may experience naming and shaming by environmental groups, the media, and other interested parties.80 Domestically, after nations choose their emission reduction contribution, they will likely face some pressure from groups in their country regarding their performance under the contribution. Internationally, the Agreement is also designed to create peer pressure among states, which could be exerted on states that are failing to meet their commitments. The naming and shaming function between states delivers the brunt of the Agreement’s enforcement mechanism. Though the enforcement tools of the Paris Agreement do not create actual legal liability for states that neglect their commitments, the enforcement strategies should not be seen as toothless.81 By **operating with multiple kinds of enforcement**, and engaging with both domestic and international paradigms over a long period of time, the Paris Agreement consciously **increases the** likelihood of **immediate enforcement** and **of** transitioning from mere statute to **binding customary international law**.82

#### Warming causes extinction

Yangyang Xu 17, Assistant Professor of Atmospheric Sciences at Texas A&M University; and Veerabhadran Ramanathan, Distinguished Professor of Atmospheric and Climate Sciences at the Scripps Institution of Oceanography, University of California, San Diego, 9/26/17, “Well below 2 °C: Mitigation strategies for avoiding dangerous to catastrophic climate changes,” Proceedings of the National Academy of Sciences of the United States of America, Vol. 114, No. 39, p. 10315-10323

We are proposing the following extension to the DAI risk categorization: warming greater than 1.5 °C as “dangerous”; warming greater than 3 °C as “catastrophic?”; and warming in excess of 5 °C as “unknown??,” with the understanding that changes of this magnitude, not experienced in the last 20+ million years, pose existential threats to a majority of the population. The question mark denotes the subjective nature of our deduction and the fact that catastrophe can strike at even lower warming levels. The justifications for the proposed extension to risk categorization are given below.

From the IPCC burning embers diagram and from the language of the Paris Agreement, we infer that the DAI begins at warming greater than 1.5 °C. Our criteria for extending the risk category beyond DAI include the potential risks of climate change to the physical climate system, the ecosystem, human health, and species extinction. Let us first consider the category of catastrophic (3 to 5 °C warming). The first major concern is the issue of tipping points. Several studies (48, 49) have concluded that 3 to 5 °C global warming is likely to be the threshold for tipping points such as the collapse of the western Antarctic ice sheet, shutdown of deep water circulation in the North Atlantic, dieback of Amazon rainforests as well as boreal forests, and collapse of the West African monsoon, among others. While natural scientists refer to these as abrupt and irreversible climate changes, economists refer to them as catastrophic events (49).

Warming of such magnitudes also has catastrophic human health effects. Many recent studies (50, 51) have focused on the direct influence of extreme events such as heat waves on public health by evaluating exposure to heat stress and hyperthermia. It has been estimated that the likelihood of extreme events (defined as 3-sigma events), including heat waves, has increased 10-fold in the recent decades (52). Human beings are extremely sensitive to heat stress. For example, the 2013 European heat wave led to about 70,000 premature mortalities (53). The major finding of a recent study (51) is that, currently, about 13.6% of land area with a population of 30.6% is exposed to deadly heat. The authors of that study defined deadly heat as exceeding a threshold of temperature as well as humidity. The thresholds were determined from numerous heat wave events and data for mortalities attributed to heat waves. According to this study, a 2 °C warming would double the land area subject to deadly heat and expose 48% of the population. A 4 °C warming by 2100 would subject 47% of the land area and almost 74% of the world population to deadly heat, which could pose existential risks to humans and mammals alike unless massive adaptation measures are implemented, such as providing air conditioning to the entire population or a massive relocation of most of the population to safer climates.

Climate risks can vary markedly depending on the socioeconomic status and culture of the population, and so we must take up the question of “dangerous to whom?” (54). Our discussion in this study is focused more on people and not on the ecosystem, and even with this limited scope, there are multitudes of categories of people. We will focus on the poorest 3 billion people living mostly in tropical rural areas, who are still relying on 18th-century technologies for meeting basic needs such as cooking and heating. Their contribution to CO2 pollution is roughly 5% compared with the 50% contribution by the wealthiest 1 billion (55). This bottom 3 billion population comprises mostly subsistent farmers, whose livelihood will be severely impacted, if not destroyed, with a one- to five-year megadrought, heat waves, or heavy floods; for those among the bottom 3 billion of the world’s population who are living in coastal areas, a 1- to 2-m rise in sea level (likely with a warming in excess of 3 °C) poses existential threat if they do not relocate or migrate. It has been estimated that several hundred million people would be subject to famine with warming in excess of 4 °C (54). However, there has essentially been no discussion on warming beyond 5 °C.

Climate change-induced species extinction is one major concern with warming of such large magnitudes (>5 °C). The current rate of loss of species is ∼1,000-fold the historical rate, due largely to habitat destruction. At this rate, about 25% of species are in danger of extinction in the coming decades (56). Global warming of 6 °C or more (accompanied by increase in ocean acidity due to increased CO2) can act as a major force multiplier and expose as much as 90% of species to the dangers of extinction (57).

The bodily harms combined with climate change-forced species destruction, biodiversity loss, and threats to water and food security, as summarized recently (58), motivated us to categorize warming beyond 5 °C as unknown??, implying the possibility of existential threats. Fig. 2 displays these three risk categorizations (vertical dashed lines).

#### NEOs can and will kill us all – ignore defense that confuses uncertainty with improbability – uncertainty in assessments means you should assign it a higher risk

Boslough 19 -- Mark Boslough (University of New Mexico), “Chapter 13 Uncertainty and Risk at the Catastrophe Threshold”, 2019, Planetary Defense, Space and Society, https://dl1.cuni.cz/pluginfile.php/634091/mod\_resource/content/1/Planetary%20Defence.pdf

The planetary defense community came to a similar conclusion. The NEO population is analogous the numbers of rounds in the revolvers of our pretend laboratory experiment. But the expected consequences of an impact depend on the size of the asteroid. The largest asteroids have the greatest effect—including the possibility of extinction—but the quantification of consequence is also very uncertain. We simply do not know how big an asteroid must be to cause an ecological collapse, to destroy agricultural production and end civilization, or to wipe out the human race. This calculation is not possible because we do not understand all the damage mechanisms associated with an Earth system that is complex and nonlinear. The asteroid that erased the dinosaurs altered the Earth forever, first by direct impact effects—the generation of an enormous crater and expulsion of ejecta. About 100 million megatons of energy was released in a massive explosion that changed the atmosphere, heating it up by an unknown amount. The air became opaque with dust and debris, leading to an impact winter that lasted years. The composition and radiative properties of the atmosphere were forever altered, and the climate changed. The precise mechanism for the resulting mass extinction is still debated and is unlikely to ever be completely understood. Fortunately, impacts by 10-km asteroids occur only once every 100 million years or so. The current risk is zero, because a 10-km asteroid on a collision course would be large enough to have been discovered already. The same cannot be said for long-period comets, however, the frequency of large comets entering the inner Solar System is low. A 5-km asteroid almost certainly exceeds the global catastrophe threshold, but at half the diameter of the dinosaur killer. An asteroid’s mass governs its impact energy and damage potential, so mass is a better measure of “size” for purposes of consequence estimates. A 5-km asteroid is therefore really only an eighth as big as the dinosaur killer, and its impact would deliver about one-eighth the destructive energy (for a given impact velocity). But there are more of the smaller ones, so the Earth is exposed to more frequent impacts from them (once about every 30 million years). The Earth doesn’t experience mass extinctions with that high of a frequency, so it is unlikely that 5-km asteroids exceed the extinction threshold, at least not every time they hit. But if one were to hit the Earth today, the energy released (roughly 10 million megatons) and the amount of debris produced would lead to certain global catastrophe, killing billions of people. The population of asteroids continues to increase as the size (and consequences) go down. Like the “bullets-in-guns” thought experiment, space is a shooting gallery where most of the shots are relatively harmless, but rare ones are catastrophic. There are sound arguments based on physics and backed by evidence in the geological record that more frequent and smaller impacts can have local, regional, or even continental-scale consequences without causing a major climate disruption or global catastrophe. That suggests the existence of an unknown size threshold for global catastrophe. There is no reason to think that such a threshold even corresponds to a definite size. An impact into one spot might release a large quantity of planet-warming greenhouse gases or cause soot-producing firestorms, resulting in an impact winter. On the other hand, if it landed in a deep ocean basin, there might be little if any global consequences. The threshold for catastrophe is therefore fuzzy in addition to being uncertain. 13.6 Avoiding Catastrophe by Situational Awareness Chapman and Morrison (1994) published the first comprehensive probabilistic risk assessment for asteroids and comets. They used observations of the effects of nuclear weapons along with physics-based scaling laws to estimate the direct damage caused by an impact of a given size. However, such scaling laws only work well for impacts that are too small to cause indirect global environmental effects such as climate change. They argued that above some threshold size (which they estimated to be around 1.5 km in diameter, with large uncertainty) a comet or asteroid impact would create a global catastrophe that would kill at least a quarter of the world’s population, increasing all the way up to extinction for the largest impacts. They spliced the nuclear weapons-based estimates together with the global catastrophe estimates to create a single, but crude “kill curve” that related the number of deaths to the size of an impacting body. In our Russian Roulette illustration, our three different guns were loaded with three different integer numbers of live rounds (since bullets exist as discrete units). This is a discrete math problem with three different possible consequences, each with its own probability. For the planetary defense risk assessment, the size of the comet or asteroid is a continuous parameter, so the sum becomes an integral. We can solve it by integrating the kill curve (as a function of size) times the probability of an impact of that size, over all possible sizes. In practice, this is done by dividing the curves up into discrete size bins. One can construct a table consisting of the number of expected impacts within some size range in a specified interval of time, and the number of resulting fatalities (averaged over all possible scenarios). According to Chapman and Morrison (1994), the expected long-term number of impact fatalities per year is 3000 if the threshold asteroid diameter for a globally catastrophic impact is 1.5 km (for further discussion of the threshold for global impact effects, see (Toon et al. 1997)). If our ability to simulate the consequences of an impact were perfect, we could improve on these estimates by running a statistically significant number of computer experiments and determining how many people would be killed, on average, from an impact of a given size. We could simulate random impacts in numbers proportional to the size distribution of the asteroid population, add up the numbers of fatalities, and divide by the number of impacts to generate a better kill curve. Unfortunately, our ability to simulate impact consequences is still far from perfect. The estimates for ocean impacts are particularly uncertain because the efficiency of impact tsunami generation is not well understood. The severity of climate-changing global catastrophes from asteroid impacts are even more uncertain because climate is a nonlinear dynamic system with unknown thresholds and feedbacks. With increased uncertainty comes greater assessed risk. Most of the uncertainty is associated with impact consequences and the “kill curve”. Complex geophysical simulations will never be perfect, therefore decisions will always need to be made in the face of this uncertainty. Nevertheless, such calculations are the best way to ensure that such decisions are objective. The estimated risk of a few thousand fatalities per year is counterintuitive, because there are no examples of unambiguous, confirmed asteroid fatalities. It depends on low-probability, high consequence events—something that only happens every million years or so but could kill hundred million people. The odds of such an event taking place in a given year are only about one in a million, but it would contribute 100 fatalities per year to the total. The expected number of fatalities per year is zero, but the long-term average is much greater. This is not the only possible way to quantify risk, and may not even be the best, yet it has become the de facto metric for the impact risk assessments, for intercomparison of contributing factors, and for performing sensitivity studies in support of cost/benefit analyses for various risk-reduction strategies. As an example, the Chapman and Morrison (1994) analysis led to an obvious policy recommendation: catastrophe avoidance. This is analogous to removing the single live round from the gun that is pointed at your head in the Russian Roulette example. The optimal risk reduction method is to prevent large impacts. The first step toward avoidance of catastrophic impact is to find all the asteroids in Earthcrossing orbits that are above the global catastrophe threshold. This recommendation led to the establishment of a survey program and the 1998 NASA directive to discover 90% of NEOs greater than 1 km in diameter. This was also the easiest solution, because there are only about 1,000 NEOs of that size. Since they are also the biggest and brightest in the sky, they were the easiest to find. The survey was a success and led to a large reduction in assessed risk. Using astronomical NEO surveys to eliminate catastrophic risk is based on the same philosophy as looking both ways before crossing the street. The survey is an act of situational awareness that doesn’t by itself change the probability of impact. An object in a deterministic orbit will either collide with the Earth on some specified time interval or it won’t. Its intrinsic impact probability is either zero or one. The situational awareness provided by looking creates the opportunity to take preventive action to mitigate the risk if something is discovered to be on a collision course. A pedestrian can change his or her own course by waiting until a potentially hazardous vehicle passes. For planetary defense, the preventive option of choice is asteroid deflection. But without a survey to discover the threat, that option is not available.

## OFF

#### The plan requires clarifying international space law since China has to prove it’s exclusion from the OST---causes strategic bargaining to extract concessions

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

V. MITIGATION VS. REMOVAL

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

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

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

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

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

#### The US will use that opportunity to push Artemis Accords and bilateralization – undermines multilateral space law.

Wall 20 – Senior Space Writer with Space.com, former herpetologist and wildlife biologist, Ph.D. in evolutionary biology from the University of Sydney, Australia; citing Boley (Department of Physics and Astronomy, University of British Columbia, Vancouver) and Byers (Department of Political Science, University of British Columbia, Vancouver)

Mike Wall, 10-8-2020, “US policy could thwart sustainable space development, researchers say,” Space.com, https://www.space.com/us-space-policy-mining-artemis-accords DD

The United States' space policy threatens the safe and sustainable development of the final frontier, two researchers argue.

The U.S. is pushing national rather than multilateral regulation of space mining, an approach that could have serious negative consequences, astronomer Aaron Boley and political scientist Michael Byers, both of the University of British Columbia in Vancouver, write in a "Policy Forum" piece that was published online today (Oct. 8) in the journal Science.

Boley and Byers cite the 2015 passage of the Commercial Space Launch Competitiveness Act, which explicitly granted American companies and citizens the right to mine and sell space resources. That right was affirmed this past April in an executive order signed by President Donald Trump, they note.

The researchers also point to NASA's announcement last month that it intends to buy moon dirt and soil collected by private companies, and its plan to sign bilateral agreements with international partners that want to participate in the agency's Artemis program of crewed lunar exploration.

Artemis, one of NASA's highest-profile projects, aims to return astronauts to the moon in 2024 and establish a long-term, sustainable human presence on and around Earth's nearest neighbor by the end of the decade. Making all of this happen will require the extensive use of lunar resources, such as the water ice that lurks on the permanently shadowed floors of polar craters, NASA officials have said.

Boley and Byers take special aim at the planned bilateral agreements, known as the Artemis Accords. In promoting them, the U.S. "is overlooking best practice with regard to the sustainable development of space," the researchers write.

"Instead of pressing ahead unilaterally and bilaterally, the United States should support negotiations on space mining within the UN [United Nations] Committee on the Peaceful Uses of Outer Space, the same multilateral body that drafted the five major space treaties of the 1960s and '70s," they write in the Science piece. (The most important of the five is the 1967 Outer Space Treaty, which forms the basis of international space law.)

"Meanwhile, NASA’s actions must be seen for what they are — a concerted, strategic effort to redirect international space cooperation in favor of short-term U.S. commercial interests, with little regard for the risks involved," Boley and Byers add.

The researchers worry that the U.S. is setting an unfortunate precedent for other countries to follow, and that space mining and other exploration activities may therefore proceed in a somewhat careless and chaotic fashion in the not-too-distant future.

#### That returns space to might-makes-right imperial conflict.

O’Brien 20 – member of the International Institute of Space Law and founder of The Space Treaty Project, retired attorney and former member of the NASA-Hastings Law Project

Dennis O’Brien, 6-29-2020, “The Artemis Accords: repeating the mistakes of the Age of Exploration,” *The Space Review*, https://www.thespacereview.com/article/3975/1 DD

In the spring of 1493, the King and Queen of Spain sent an envoy to the Pope in Rome. Along with Portugal, Spain had just used its advanced sailing and navigation technology to reach “new worlds,” areas of the Earth that had not been previously discovered by Europeans. But they had a problem: they wanted to establish sovereign property rights in the lands they had discovered, but they weren’t sure they could do so under their own authority. So, they turned to the only international authority in Europe at that time, the Catholic Church, which held sway over governments from Portugal to Poland, from the Arctic to the Mediterranean. If the Church would establish a legal framework that granted them sovereignty, then those nations would be bound to recognize it.[2]

This is the first lesson that the current governments of the world can learn from the Age of Exploration & Empire that began five centuries ago. Even then, the most powerful nation in Europe, with the largest army and most advanced technology, realized that it could not unilaterally establish property rights or any other kind of sovereignty without the approval of an international authority. After the Church granted that authority, Spain was able to create one of the greatest empires in history. Spain and Portugal formalized the arrangement with a binding international agreement, the Treaty of Tordesillas, whose purpose was to ensure peaceful cooperation between their nations, primarily by establishing a line of demarcation that separated their areas of activity.[3]

Unfortunately, the legal framework so established was based on national dominance, not multilateral international cooperation. The grant of sovereignty was exclusive, made only to Spain and Portugal, and it required them to subjugate the “savages” in the lands they discovered by taking along Church missionaries. This exclusivity did not sit well with other nations as they also developed the technologies of exploration; it was one of the reasons many northern European nations joined the Protestant Reformation and rejected the authority of the Pope in Rome. Without a fair and equitable international agreement that honored the interests of emerging states, the Church lost its ability to act as an arbiter between nations.

Even worse, the dominance model set up centuries of conflict among the major powers in Europe. Militant nationalism and economic colonialism became the principles guiding national policy. The result was centuries of war, suffering, and neglect among the major powers and the nations they subjugated. This pattern did not end until the 20th century, when the major powers fought two world wars and finally dismantled their colonial empires: sometimes peacefully, sometimes by force.

By the mid-1960s, most countries on Earth were independent or on their way to becoming so. But a new conflict had started, one that threatened to repeat the mistakes of five centuries earlier. The great powers were once again using their advanced technology to explore new worlds, and the race was on to plant their flag on the Moon first. Under the ancient traditions, the country that did so would have a claim against all others for possession and use of the territory. The Cold War was about to expand into outer space.

But then something wonderful happened. In 1967, the United Nations proposed, and the world’s space powers accepted, an international agreement known as the Outer Space Treaty.[4] The treaty was an intentional effort to avoid the mistakes of the Age of Exploration & Empire. Article I states, “The exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.” Article II is even more specific: “Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.” Because of this treaty, the United States carried a plaque to the Moon that said, “We came in peace for all mankind.”[5] When the Apollo 11 astronauts planted the US flag, they did so out of pride, but did not establish any claim or national priority.

This legal framework worked well initially, but people soon started wondering about what to do when countries or private entities wanted to start commercial activity on the Moon, or build settlements. The solution was the Moon Treaty, proposed by the United Nations and adopted by enough nations to come into force in 1984.[6] But it has not yet been adopted by any major spacefaring nation. The United States, by a recent executive order, has specifically renounced the treaty and stated its intentions to extract materials from the Moon without any international agreement.[7]

The newly announced Artemis Accords go even further. Although the actual Accords have not been released pending consultation with possible partners, the summary provided by NASA[8] indicates that the United States will unilaterally interpret the Outer Space Treaty to allow “space resource extraction,” despite the prohibition against appropriation in Article II of the Treaty. There will also be “safety zones” to avoid “harmful interference” with such operations. The effect is to establish exclusive economic zones, especially if “harmful interference” is defined to include economic harm, not just safety. Will the new Space Force be used to protect such economic interests? Will other nations be excluded if they support the Moon Treaty?[9] Will private actors be required to follow the same rules as states, as recommended in the recently drafted Moon Village Principles?[10] This is the slippery slope of using unilateral action to establish economic rights rather than an international agreement.

The Artemis Accords acknowledge many beneficial agreements and policies: The Outer Space Treaty, Rescue Agreement, and Registration Convention (though not the Liability Convention); peace, transparency, interoperability, protecting heritage sites and sharing scientific information. But its unilateral authorization of space mining is a continuation of the Trump Administration’s underlying foreign policy strategy: unilateral dominance over international cooperation. The United States has withdrawn from the Paris Accords, the Iranian nuclear deal, and, in the middle of a pandemic, the World Health Organization. Dominance has even become the theme of the administration’s domestic policy, with President Trump recently telling governors, “If you don't dominate, you're wasting your time… You have to dominate.”[11] That core philosophy is now being applied to outer space, as Vice President Mike Pence proudly announced in 2018. Despite the lessons of history, the United States is going full speed ahead with the “dominance” model of space development rather than working with the nations of the world to develop a “cooperation” model. Outer space, which so far has been preserved for peace and cooperation, is about to be spoiled, perhaps forever.

#### Goes nuclear – space conflict is uniquely escalatory.

Farley 22 – PhD, Senior Lecturer at the Patterson School at the University of Kentucky

Robert Farley, 1-9-2022, “Does A Space War Mean A Nuclear War?” 1945, https://www.19fortyfive.com/2022/01/does-a-space-war-mean-a-nuclear-war/ DD

The recent Russian anti-satellite test didn’t tell the world anything new, but it did reaffirm the peril posed by warfare in space. Debris from explosions could make some earth orbits remarkably risky to use for both civilian and military purposes. But the test also highlighted a less visible danger; attacks on nuclear command and control satellites could rapidly produce an extremely dangerous escalatory situation in a war between nuclear powers. James Acton and Thomas Macdonald drew attention to this problem in a recent article at Inside Defense. As Acton and MacDonald point out, nuclear command and control satellites are the connective tissue of nuclear deterrence, assuring countries that they’re not being attacked and that they’ll be able to respond quickly if they are.

For a long time, these strategic early-warning satellites were akin to a center of gravity in ICBM warfare. Nuclear deterrence requires awareness that an attack is underway. Attacks on the monitoring system could easily be read as an attempt to blind an opponent in preparation for general war, and could themselves incur nuclear retaliation. Thus, the nuclear command and control satellites are critical to the maintenance of nuclear deterrence. They make it possible to distribute an order from the chief of government to the nuclear delivery systems themselves. Consequently, their destruction might lead to hesitation or delay in performing a nuclear launch order.

It was only later that the relevance of satellites for conventional warfare became clear. Satellites could reconnoiter enemy positions and, more importantly, provide communications for friendly forces. Indeed, the expansion of the role of satellites in conventional warfare has complicated the prospect of space warfare. States have a clear reason for targeting enemy satellites which support conventional warfare, as those satellites enable the most lethal part of the kill chain, the communications and recon networks that link targets with shooters. Thus, we now have a situation in which space military assets have both nuclear and conventional roles. In a conflict confusion and misperception could rapidly become lethal. If one combatant views an attack against nuclear command and control as a prelude to a general nuclear attack, it might choose to pre-empt.

Nuclear powers have dealt with problems in this general category for a good long while; would a conventional attack against tactical nuclear staging areas represent an escalation, for example? Would the use of ballistic missiles that can carry either conventional or nuclear weapons trigger a nuclear response? Do attacks against air defense networks that have both strategic and tactical responsibilities run the risk of triggering a nuclear response? There’s also the danger that damage to communications networks designated for conventional combat could force traffic onto the nuclear control systems, further confusing the issue.

No one has ever fought a nuclear war, and no two nuclear powers have engaged in a prolonged, high-intensity conventional conflict. Now that conventional systems have become implicated in space technologies for reconnaissance, targeting, and communications, leaders will have to make very difficult, very careful decisions on what enemy capabilities they want to disrupt. Acton and MacDonald propose a straightforward ban on attacks against nuclear satellite infrastructure, which would also require agreement to keep nuclear and conventional communications networks separate. This is the little ask; countries should plan to fight more carefully. The big ask is for a multilateral ban to prevent future anti-satellite weapons tests in space. This would reduce the danger that debris could close off, temporarily or permanently, human access to certain locations in earth orbit. But given that countries use satellites for the conduct of conventional military operations, it’s a lot to ask for warfighters to consider critical military infrastructure off-limits in any particular conflict.

## CASE

### Presumption

#### The companies they reference are state-owned companies

Liu et al 19 (Irina, Evan Linck, Bhavya Lal, Keith W. Crane, Xueying Han, Thomas J. Colvin, IDA Science and Technology Policy Institute) Evaluation of China’s Commercial Space Sector, Institute for Defense Analysis Science & Technology Institute <https://www.ida.org/-/media/feature/publications/e/ev/evaluation-of-chinas-commercial-space-sector/d-10873.ashx> EE

To date, nearly all of China’s accomplishments in space have been achieved by the Chinese government, state-owned enterprises (SOE), or their subsidiaries and suppliers. Historically, China’s space industry has predominantly consisted of SOEs controlled by China’s central or provincial governments. Since 1999, two SOEs, the China Aerospace Science and Technology Corporation (CASC, 中国航天科技集团) and the China Aerospace Science & Industry Corporation (CASIC, 中国航天科工集团),2 have had a near duopoly on launch and space technology in China, with CASC serving as the primary SOE responsible for launch and space technologies.3

#### They left off the next paragraph of their own evidence which flows neg and admits Chinese space companies aren’t even private – vote neg on no solvency

\*\*DEBATEDRILLS READS GREEN

1AC Patel 21 — (Neel V. Patel, Neel is the space reporter for MIT Technology Review, and he writes The Airlock newsletter. Before joining, he worked as a freelance science and technology journalist, contributing stories to Popular Science, The Daily Beast, Slate, Wired, the Verge, and elsewhere. Prior to that, he was an associate editor for Inverse, where he grew and led the website’s space coverage., “China’s surging private space industry is out to challenge the US“, MIT Technology Review, 1-21-2021, Available Online at https://www.technologyreview.com/2021/01/21/1016513/china-private-commercial-space-industry-dominance, accessed 1-11-2022, HKR-AR) recut DebateDrills EE

Until recently, China’s space activity has been overwhelmingly dominated by two state-owned enterprises: the China Aerospace Science & Industry Corporation Limited (CASIC) and the China Aerospace Science and Technology Corporation (CASC). A few private space firms have been allowed to operate in the country for a while: for example, there’s the China Great Wall Industry Corporation Limited (in reality a subsidiary of CASC), which has provided commercial launches since it was established in 1980. But for the most part, China’s commercial space industry has been nonexistent. Satellites were expensive to build and launch, and they were too heavy and large for anything but the biggest rockets to actually deliver to orbit. The costs involved were too much for anything but national budgets to handle.

That all changed this past decade as the costs of making satellites and launching rockets plunged. In 2014, a year after Xi Jinping took over as the new leader of China, the Chinese government decided to treat civil space development as a key area of innovation, as it had already begun doing with AI and solar power. It issued a policy directive called Document 60 that year to enable large private investment in companies interested in participating in the space industry.

“Xi’s goal was that if China has to become a critical player in technology, including in civil space and aerospace, it was critical to develop a space ecosystem that includes the private sector,” says Namrata Goswami, a geopolitics expert based in Montgomery, Alabama, who’s been studying China’s space program for many years. “He was taking a cue from the American private sector to encourage innovation from a talent pool that extended beyond state-funded organizations.”

As a result, there are now 78 commercial space companies operating in China, according to a 2019 report by the Institute for Defense Analyses. More than half have been founded since 2014, and the vast majority focus on satellite manufacturing and launch services.

For example, Galactic Energy, founded in February 2018, is building its Ceres rocket to offer rapid launch service for single payloads, while its Pallas rocket is being built to deploy entire constellations. Rival company i-Space, formed in 2016, became the first commercial Chinese company to make it to space with its Hyperbola-1 in July 2019. It wants to pursue reusable first-stage boosters that can land vertically, like those from SpaceX. So does LinkSpace (founded in 2014), although it also hopes to use rockets to deliver packages from one terrestrial location to another.

Spacety, founded in 2016, wants to turn around customer orders to build and launch its small satellites in just six months. In December it launched a miniaturized version of a satellite that uses 2D radar images to build 3D reconstructions of terrestrial landscapes. Weeks later, it released the first images taken by the satellite, Hisea-1, featuring three-meter resolution. Spacety wants to launch a constellation of these satellites to offer high-quality imaging at low cost.

To a large extent, China is following the same blueprint drawn up by the US: using government contracts and subsidies to give these companies a foot up. US firms like SpaceX benefited greatly from NASA contracts that paid out millions to build and test rockets and space vehicles for delivering cargo to the International Space Station. With that experience under its belt, SpaceX was able to attract more customers with greater confidence.

Venture capital is another tried-and-true route. The IDA report estimates that VC funding for Chinese space companies was up to $516 million in 2018—far shy of the $2.2 billion American companies raised, but nothing to scoff at for an industry that really only began seven years ago. At least 42 companies had no known government funding.

And much of the government support these companies do receive doesn’t have a federal origin, but a provincial one. “[These companies] are drawing high-tech development to these local communities,” says Hines. “And in return, they’re given more autonomy by the local government.” While most have headquarters in Beijing, many keep facilities in Shenzhen, Chongqing, and other areas that might draw talent from local universities.

There’s also one advantage specific to China: manufacturing. “What is the best country to trust for manufacturing needs?” asks James Zheng, the CEO of Spacety’s Luxembourg headquarters. “It’s China. It’s the manufacturing center of the world.” Zheng believes the country is in a better position than any other to take advantage of the space industry’s new need for mass production of satellites and rockets alike.

Making friends

The most critical strategic reason to encourage a private space sector is to create opportunities for international collaboration—particularly to attract customers wary of being seen to mix with the Chinese government. (US agencies and government contractors, for example, are barred from working with any groups the regime funds.) Document 60 and others issued by China’s National Development and Reform Commission were aimed not just at promoting technological innovation, but also at drawing in foreign investment and maximizing a customer base beyond Chinese borders.

**“China realizes there are certain things they cannot get on their own,”** says Frans von der Dunk, a space policy expert at the University of Nebraska–Lincoln. Chinese companies like LandSpace and MinoSpace have worked to accrue funding through foreign investment, escaping dependence on state subsidies. And by avoiding state funding, a company can also avoid an array of restrictions on what it can and can’t do (such as constraints on talking with the media). Foreign investment also makes it easier to compete on a global scale: you’re taking on clients around the world, launching from other countries, and bringing talent from outside China.

Although China is taking inspiration from the US in building out its private industry, the nature of the Chinese state also means these new companies face obstacles that their rivals in the West don’t have to worry about. While Chinese companies may look private on paper, they must still submit to government guidance and control, and accept some level of interference. It may be difficult for them to make a case to potential overseas customers that they are independent. The distinction between companies that are truly private and those that are more or less state actors is still quite fuzzy, especially if the government is a frequent customer. “That could still lead to a lack of trust from other partners,” says Goswami. It doesn’t help that the government itself is often [very cagey about what its national program is even up to](https://www.bbc.com/news/science-environment-54076895).

And Hines adds that it’s not always clear exactly how separate these companies are from, say, the People’s Liberation Army, given the historical ties between the space and defense sectors. “Some of these things will pose significant hurdles for the commercial space sector as it tries to expand,” he says.

Don’t let the aff be extra-t and justify why they get rid of private companies supplying – apopriraiton means to take as use, occupy, we’ll send after 1nc

#### appropriation means taking possession of something

**Dictionary ND**, Dictionary.com, “appropriation”, <https://www.dictionary.com/browse/appropriation>, DD AG

**the act of** appropriating or **taking possession of something**, often without permission or consent.

#### Appropriation of outer space is the exercise of exclusive control.

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

The issues presented in relation to the nonappropriation article of the Outer Space Treaty should be clear.214 The ITU has, quite blatantly, created something akin to “property interests in outer space.”215 It allows nations to exclude others from their orbital slots, even when the nation is not currently using that slot.216 This is directly in line with at least one definition of outer-space appropriation.217 [\*\*Start Footnote 217\*\*Id. at 236 (“**Appropriation of outer space**, **therefore, is ‘the exercise of exclusive control or exclusive use’ with a sense of permanence, which limits other nations’ access to it.**”) (quoting Milton L. Smith, The Role of the ITU in the Development of Space Law, 17 ANNALS AIR & SPACE L. 157, 165 (1992)). \*\*End Footnote 217\*\*]The ITU even allows nations with unused slots to devise them to other entities, creating a market for the property rights set up by this regulation.218 In some aspects, this seems to effect exactly what those signatory nations of the Bogotá Declaration were trying to accomplish, albeit through different means.219 Though the legitimacy of such a regime may be questionable, it remains in effect, showing that it is at least tolerable under the edict of the nonappropriation article of the Outer Space Treaty.220 There must, therefore, be something about the ITU that differentiates it from something like the Bogotá Declaration.221 The most immediate difference is the character of the body promulgating the regulation. The Bogotá Declaration is an agreement between eight countries claiming rights to all space above them.222 The ITU’s regulations are promulgated under the auspices of the U.N.223 While the Bogotá Declaration is an international agreement, it is still a very limited cooperation.224 The ITU, through the U.N., comprises the largest possible cooperation of international actors, giving it an international character as opposed to simply a multinational character.225 Furthermore, the allocation of orbital slots by the ITU is a response to the limited character of geostationary orbits.226 While the Bogotá Declaration was probably promulgated in response to a few nations’ fears that they may be excluded from the space arena,227 **the allocation system of the ITU is a measure to make sure that the GEO resource is efficiently managed for the use of all mankind**.228

#### It’s too early to pursue binding international agreements, which incentivizes cheating, & causes commercial defection

Hitchens 19 – Senior Research Scholar at the Center for International and Security Studies

Theresa Hitchens, “Space traffic management: U.S. military considerations for the future,” Journal of Space Safety Engineering, Volume 6, Issue 2, Pages 108-112, June 2019, <https://www.sciencedirect.com/science/article/abs/pii/S2468896719300291>

--no guidelines yet on best practices – international regime would set the floor too low and allow easy noncompliance

--causes flags of convenience – countries would race to the bottom to enforce stm regime, and companies would go to country doing worst job implementing commitments

--instead, figuring out WHAT the best practices are first is key

Further, the Trump administration has backed away from international efforts to develop best practices for space operations under the auspices of the United Nations at the Committee for the Peaceful Uses of Outer Space (COPUOS). According to State Department officials, rather than supporting new discussions to expand upon the set of 21 guidelines developed by the Scientific and Technical Subcommittee's Working Group on the Long-Term Sustainability of Outer Space and approved by the Committee in 2018, the U.S. intends to focus on national implementation. And while the COPUOS Legal Subcommittee has had an annual agenda item on STM since 2015, the U.S. position has been that it is too early to seek a legally binding international accord on STM, as there is not yet an agreed multilateral understanding of the necessary parameters of such a regime. The U.S. government also has argued during Legal Subcommittee meetings that the Scientific and Technical Subcommittee should first look at what technical approaches are even feasible to create such a regime – although at the same time the U.S. has not moved to propose the establishment of formal STM discussions in the latter subcommittee.

An STM regime followed only by one or a handful of nations would do little to create a safer space environment. Worse yet would be a situation where the rules governing safe practices on orbit differ widely from country to country, as it would drive commercial industry to seek the locale with the least restrictive rules – as already a serious problem regarding the shipping industry where “flags of convenience” are common so as to minimize the need to comply with environmental safety and health regulations. As an example of how such problems could manifest, U.S. firm Swarm Technologies in January 2018 managed to launch four very small satellites, called SpaceBEES, on an Indian government Polar Satellite Launch Vehicle after having been denied a U.S. launch license by the Federal Communications Commission because of safety concerns [6]. This violation of U.S. licensing law was made possible because neither the company, Spaceflight, that arranged for the SpaceBEES ride share on the Indian rocket nor the Indian government required Swarm to provide evidence of a license. Spaceflight, a U.S. company, has now changed its operating procedures to require proof [5], 2 though there is no evidence that the Indian government has done the same.

### ADV—Co-OP

This Curio ev is really bad

1] it cites alt causes like russia buying products which the plan doesn’t stop since it’s a question of reducing supply

2] lunar bases are non-uq since it’s state based

The Bowman ev:

1] Concedes that it’s a question of a Russian and Chinese weapon militarization not a bond over commercial goods which the aff prohibits

#### Their author also admits funding issues make Chinese commercial space exploration extremely difficult

1AC Patel 21 — (Neel V. Patel, Neel is the space reporter for MIT Technology Review, and he writes The Airlock newsletter. Before joining, he worked as a freelance science and technology journalist, contributing stories to Popular Science, The Daily Beast, Slate, Wired, the Verge, and elsewhere. Prior to that, he was an associate editor for Inverse, where he grew and led the website’s space coverage., “China’s surging private space industry is out to challenge the US“, MIT Technology Review, 1-21-2021, Available Online at https://www.technologyreview.com/2021/01/21/1016513/china-private-commercial-space-industry-dominance, accessed 1-11-2022, HKR-AR) recut DebateDrills EE

Other challenges

None of these new companies are yet profitable, and it will be quite some time before they are. “There isn’t any sign of indication that this industry will flop,” says Hines. “But many experts do think a lot of these companies will go out of business.” Apart from the challenge of attracting customers outside China, many companies are still trying to figure out who exactly their customers ought to be.

American companies like SpaceX and Blue Origin had billionaire founders ready to burn cash to take on large risks, push past big failures, and finally get off the ground. And while a Chinese billionaire [entered the industry last year,](https://www.bloomberg.com/news/articles/2020-03-03/geely-to-make-satellites-as-billionaire-li-follows-musk-to-space?sref=E9Urfma4)“there is no Chinese Elon Musk to push these riskier ventures forward,” says Hines. It’s also unclear whether Chinese companies, even those supported by wealthy backers, will have that appetite for risk.

### ADV—HEG

No link to the rajapolan ASAT prolif

1] this is about chinese government space which the plan doesn’t stop – HOLD THE LINE ON WORDPLAY – the link ev is about chinese space control via the private sector but that doesn’t have to do with ASATs, etc..

2] Chronological, not casual – this indicates that china does commercial space and it breaks norms which have no relationship

3] Concedes already happens no when they did an ASAT test so non-uq

Conflict isn’t inevitable

1] if china believes that they need ASATS then they will develop them which takes out the link arg since its contingent on them winning its going to happen

On HEG:

1] Turn – china retaliates since if your ev is right that the commercial space industry is big then that’s a reason they’d keep it that way

2] No IL – even if they win that heg in space is key there’s no correlation between that and hard power, but alt causes check since China just moves to things like expanding the PLA military force

3] Alt causes

Autry and Kwast 19 [(Greg, a clinical professor of space leadership, policy, and business at Arizona State University’s Thunderbird School of Global Management. He served on the 2016 NASA transition team and as the White House liaison at NASA in 2017. He is the chair of the Safety Working Group for the U.S. Federal Aviation Administration’s Commercial Space Transportation Advisory Committee.) (Steve, a Lieutenant General and commander of Recruiting, Training, Educating and Development for the Air Force. He is an astronautical engineer and Harvard Fellow in Public Policy.) “America Is Losing the Second Space Race to China” Foreign Policy, 8/22/2019. https://foreignpolicy.com/2019/08/22/america-is-losing-the-second-space-race-to-china/] BC

The private sector can give the United States a much-needed rocket boost.

The current U.S. space defense strategy is inadequate and on a path to failure. President Donald Trump’s vision for a Space Force is big enough. As he said on June 18, “It is not enough to merely have an American presence in space. We must have American dominance in space.” But the Air Force is not matching this vision. Instead, the leadership is currently focused on incremental improvements to existing equipment and organizational structures. Dominating the vast and dynamic environment of space will require revolutionary capabilities and resources far deeper than traditional Department of Defense thinking can fund, manage, or even conceive of. Success depends on a much more active partnership with the commercial space industry— and its disruptive capabilities.

U.S. military space planners are preparing to repeat a conflict they imagined back in the 1980s, which never actually occurred, against a vanished Soviet empire. Meanwhile, China is executing a winning strategy in the world of today. It is burning hard toward domination of the future space markets that will define the next century. They are planning infrastructure in space that will control 21st-century telecommunications, energy, transportation, and manufacturing. In doing so, they will acquire trillion-dollar revenues as well as the deep capabilities that come from continuous operational experience in space. This will deliver space dominance and global hegemony to China’s authoritarian rulers.

Despite the fact that many in the policy and intelligence communities understand exactly what China is doing and have been trying to alert leadership, Air Force leadership has convinced the White House to fund only a slightly better satellite command with the same leadership, while sticking a new label onto their outmoded thinking. A U.S. Space Force or Corps with a satellite command will never fulfill Trump’s call to dominate space. Air Force leadership is demonstrating the same hubris that Gen. George Custer used in convincing Congress, over President Ulysses S. Grant’s better experience intuition, that he could overtake the Black Hills with repeating rifles and artillery. That strategy of technological overconfidence inflamed conflict rather than subduing it, and the 7th Cavalry were wiped out at the Battle of the Little Bighorn.

The West was actually won by the settlers, ranchers, miners, and railroad barons who were able to convert the wealth of the territory itself into the means of holding it. They laid the groundwork that made the 20th century the American Century and delivered freedom to millions of people in Europe and Asia. Of course, they also trampled the indigenous people of the American West in their wake—but empty space comes with no such bloody cost. The very emptiness and wealth of this new, if not quite final, frontier, however, means that competition for resources and strategic locations in cislunar space (between the Earth and moon) will be intense over the next two decades. The outcome of this competition will determine the fate of humanity in the next century.

China’s impending dominance will neutralize U.S. geopolitical power by allowing Beijing to control global information flows from the high ground of space. Imagine a school in Bolivia or a farmer in Kenya choosing between paying for a U.S. satellite internet or image provider or receiving those services for free as a “gift of the Chinese people.” It will be of little concern to global consumers that the news they receive is slanted or that searches for “free speech” link to articles about corruption in Western democracies. Nor will they care if concentration camps in Tibet and the Uighur areas of western China are obscured, or if U.S. military action is presented as tyranny and Chinese expansion is described as peacekeeping or liberation.

China’s aggressive investment in space solar power will allow it to provide cheap, clean power to the world, displacing U.S. energy firms while placing a second yoke around the developing world. Significantly, such orbital power stations have dual use potential and, if properly designed, could serve as powerful offensive weapons platforms.

China’s first step in this process is to conquer the growing small space launch market. Beijing is providing nominally commercial firms with government-manufactured, mobile intercontinental ballistic missiles they can use to dump launch services on the market below cost. These start-ups are already undercutting U.S. pricing by 80 percent. Based on its previous success in using dumping to take out U.S. developed industries such as solar power modules and drones, China will quickly move upstream to attack the leading U.S. launch providers and secure a global commercial monopoly. Owning the launch market will give them an unsurmountable advantage against U.S. competitors in satellite internet, imaging, and power.

The United States can still build a strategy to win. At this moment, it holds the competitive advantage in every critical space technology and has the finest set of commercial space firms in the world. It has pockets of innovative military thinkers within groups like the Defense Innovation Unit, under Mike Griffin, the Pentagon’s top research and development official. If the United States simply protects the intellectual property its creative minds unleash and defend its truly free markets from strategic mercantilist attack, it will not lose this new space race. The United States has done this before. It beat Germany to the nuclear bomb, it beat the Soviet Union to the nuclear triad, and it won the first space race.

None of those victories was achieved by embracing the existing bureaucracy. Each of them depended on the president of the day following the only proven path to victory in a technological domain: establish a small team with a positively disruptive mindset and empower that team to investigate a wide range of new concepts, work with emerging technologies, and test innovative strategies. Today that means giving a dedicated Space Force the freedom to easily partner with commercial firms and leverage the private capital in building sustainable infrastructure that actually reduces the likelihood of conflict while securing a better economic future for the nation and the world.