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# Regulation: Acts as CP, the resolution is a normative statement asking us whether something is or is not unjust. By saying that it's unjust now but regulation solves is just a counterplan IE flows neg/ Literally all of their impacts agree that appropriation is good but just needs framing.

Perm:Can’t perm: want profit and will be discouraged

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# Voters

* Timeframe:All of her nuclear impacts rest on the delgado card which surrounds the trump administration. Obviously, we are not currently in a state of nuclear warfare, as seen in my lopez card, reducing bureaucracy prevents war IE aff causes it by transitioning to public appropriation. Nonetheless, that event wont be triggered for years and poverty/climate change is ongoing, only the neg tackles ongoing dilemmAS
* Probability:again not likely, neg now
* Magnitude: explain case

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# OFF CASE

# C1: LEOs

### **Private appropriation of space through satellites is key to the development of a global internet through LEO’s.**

**Velazco 21**

Chris Velazco, November 2, 2021, “The latest space race is all about improving Internet access. Here’s what you should know.”, Washington Post, https://www.washingtonpost.com/technology/2021/11/02/satellite-internet-starlink-kuiper-faq/

Whether you knew it or not, the new space race that’s unfolding is about Internet access. Since 2019, Elon Musk’s SpaceX has put more than 1,000 of its Starlink satellites into low-earth orbit as part of a plan to provide broadband Internet to underdeveloped communities around the world. And just this week, Amazon announced that it plans to put its first prototype Project Kuiper satellites in orbit by the end of 2022 with a similar goal in mind. (Amazon founder Jeff Bezos owns The Washington Post.) These companies are trying to go after an estimated 4 billion people without access to the Internet as well as businesses that operate in remote areas such as airlines and cruise ships. It’s still unclear how those big-picture plans will ultimately shake out, but Starlink is already live and serving around 90,000 customers around the world. In the past, others have tried and failed to do just what SpaceX, Amazon and OneWeb are hoping to accomplish. Teledesic, a company partly funded by Bill Gates in the mid-1990s, failed after costs soared into the billions. Attempts by Iridium and Globalstar failed after both ended up in bankruptcy. OneWeb also filed for bankruptcy before emerging last year. Musk has said he’s aware of that history and that the success of Starlink was not guaranteed. But he has the advantage of being able to launch the satellites on SpaceX’s reusable Falcon 9 rockets.

### **The impacts are two-fold:**

### **1) increased internet access is key to reducing global poverty .**

**Farr 16**

Isabella Farr, “INTERNET ACCESS: REDUCING GLOBAL POVERTY”, <https://borgenproject.org/internet-access-reducing-global-poverty/>, The Borgen Project, June 25, 2016

In a speech to the United Nations in September 2015, Mark Zuckerberg stated, “When communities are connected, we can lift them out of poverty.” During his talk, the Facebook CEO and founder asserted that increased Internet access can aid in reducing global poverty. According to the World Bank’s 2016 World Development Report, 60 percent of the world’s population do not have access to the Internet. In the United States alone, 60 million people do not have Internet access at home. However, for the rest of the world’s population, technological advancement has provided enormous levels of wealth and development. A recent report by Price Waterhouse Cooper’s consulting and strategy firm, Strategy&, states that giving internet to the world could bring extraordinary results. If the 4.1 billion people without Internet were given access, **500 million people could be brought out of poverty**. For those in poverty, the Internet provides a multitude of opportunities, including jobs, access to global current affairs and education. In 1998, the World Hospitals and Health Services Journal released an article discussing the advantages of Internet access, arguing that “Access to information is an essential condition to development.” Almost twenty years on, researchers and institutions are still looking to the Internet as a technique for reducing global poverty.

### **2) LEO Earth Science Observation Satellites boost the African economy and solve environmental threats.**

Bailey 2021 [Stephanie Bailey, freelance journalist & IT writer, “Why Africa is sending more satellites into space,” October 6, 2021, CNN,

https://www.cnn.com/2021/09/21/business/african-satellites-spc-intl/index.html]

The report says satellites could address agricultural challenges by measuring crop health, improve water management by monitoring drought, and track tree cover for more sustainable forest management. In a continent where less than a third of the population has access to broadband, more communication satellites could help people connect to the internet. Addressing Africa's challenges South African startup Astrofica was founded four years ago, providing space consultancy services. It supported the CubeSat program at Cape Peninsula University of Technology, which launched a constellation of maritime satellites for tracking ships along the southern African coast. Astrofica's co-founder and CTO, Khalid Manjoo, says the goal of the startup is to use the space industry to address Africa's challenges — from food security to national security. It hopes to launch its first constellation of satellites by the end of 2022, "that will provide decision makers with critical data sets [in] near real time," according to Manjoo. He hopes the data will be used to monitor crop yield or track the use of fertilizers, as well as help governments with water management. "The satellites that we put up in space, it's cool stuff, but it's not necessarily the end goal; the end goal for Astrofica is to deal with the challenges and problems that we would like to solve," he says. "They cannot be solved using purely terrestrial systems, they need these critical space-based insights." Manjoo says African countries are spending too much money acquiring agricultural data from international providers, which is not timely enough — although the company welcomes collaboration with foreign partners. According to Manjoo, ride shares — where satellite manufacturers can buy a spot on someone else's rocket — have made getting to space cheaper and more accessible. Astrofica is looking to launch its first satellite on board an American SpaceX rocket, a Russian Soyuz rocket, or a Polar Satellite Launch Vehicle in India. Launching constellations Space in Africa estimates over 283 companies now operate in the continent's space and satellite industry, which it says generated more than $7.3 billion in revenue in 2019 and predicts will generate over $10 billion by 2024.

# C2: Mining

## Sub point A: asteroid mining

### **Asteroid mining solves the need to get colton from the Congo and stops human rights abuses**

Sam **Wolfe 20**, March 26, 2020, Asteroid Mining and Capitalism in Space, https://www.samwoolfe.com/2020/03/asteroid-mining-space-capitalism.html

In spite of the concerns about the ever-expanding reaches of capitalism into space**, the privatization of asteroid mining** may offer a terrestrial benefit; that is, it **may** help **put an end to the human rights abuses** involved **in mining on Earth. Many asteroids contain coltan**, a metallic mineral used for the production of tantalum capacitors, which are found in pretty much every single electronic device – laptops, cameras, video game consoles, smartphones; you name it. Coltan, unfortunately, is **a** conflict mineral. It’s a **mineral that is mined in** areas of armed conflict, most notably in **the Democratic Republic of Congo** (DRC). Other conflict minerals include cassiterite, wolframite, and gold. **The mining** of coltan in the Congo **has resulted in** a number of human rights violations, including **child labour,** forced labour, **sexual violence,** physical abuse, **human trafficking, [and] slavery,** and unsafe working conditions. In the name of putting profits over people’s rights, corporations continue to benefit from the exploitation of people in the DRC, with capitalists amassing large amounts of profit and miners receiving measly inadequate wages, working in “slave conditions”, as there are little to no labour regulations. This is surely one of the ugliest faces of capitalism. **If we are able to extract all the coltan we need from asteroids, then this may eradicate any incentive for such horrible human rights abuses** in the Congo.

### **2. Limiting terrestrial mining allows us to limit the significant environmental damage and risk of severe health conditions in nearby populations it causes.**

**Chu et al 21**

Oscar Serpell, Benjamin Paren, Wan-Yi Chu, Kleinman Center For Energy Policy. “Rare Earth Elements: A Resource Constraint Of The Energy Transition,”.”. May, 2021. Web. https://kleinmanenergy.upenn.edu/wp-content/uploads/2021/05/KCEP-Rare-Earth-Elements.pdf

Regional ecosystems can be significantly altered by the presence of mines, both physically and chemically. Site preparation, access roads, and ancillary facilities lead to direct—and often absolute— destruction of the proximate environment, while pollution from mine processes and storage of residual tailings can lead to widespread chemical imbalances and toxic contamination (Filho 2016; Xiang 2016; Ganguli 2018). REE mine tailings contain processing chemicals, salts, and radioactive materials. Tailings are particularly problematic in REE mining, because of the significant waste-to-yield ration. (Filho 2016; Xiang 2016). For every ton of REEs that are produced, there are 2,000 tons of mine tailings, including 1 to 1.4 tons of radioactive waste (Filho 2016). Tailings are most commonly stored in isolated impoundment areas called tailing ponds. These ponds require complex management, especially if the tailings contain high concentrations of uranium or thorium. Poor construction or catastrophic failure can lead to long-term and widespread environmental damage and contamination of surface or groundwater (Filho 2016). Other significant sources of pollution include aerosols and fugitive dust from tailing impoundments, which are created from cutting, drilling, and blasting rock. This pollution can accumulate in surrounding areas (Filho 2016), causing respiratory issues and also contaminating food sources—as plants absorb the airborne pollutants. An example of this is the tailing pond for the Bayan Obo mine in China. Villages in the surrounding area have experienced elevated rates of both cancer and respiratory illness, indicating that the tailings are not being properly stored (Xiang 2016). While many of these issues exist for other types of mining, they are particularly problematic for REEs, because of the large volume and radioactivity of tailings.

## Sub point b: Helium 3

### **Appropriation of Helium-3 is key to sustainable energy production and solving climate change Yahoo Finance** https://finance.yahoo.com/news/signing-historic-loi-mining-expedition-133000967.html

US Nuclear Corp (OTCQB:UCLE) and Solar System Resources Corporation in Poland signed a historic transatlantic agreement for the supply of the desperately rare helium-3 isotope from deposits located on the moon.

**Helium-3 is** humanity's hope for **cheap, ecological fusion energy without the production of radioactive wastes.** It is estimated that **200 tons** of helium-3 **would be enough to meet the global annual energy needs of all mankind without producing greenhouse gases or pollution** and without burdensome social austerities and sacrifices - unlimited, cheap, clean, green energy.Helium-3 finds many other uses beyond the energy sector, such as in research, cryogenics, quantum computers, MRI lung imaging, and nuclear spacecraft propulsion. It is also essential for the operation of security systems used to detect smuggling of fissile materials, which are utilized at airports and border crossing points around the world. It is worth mentioning that after the attacks of September 11, 2001, the demand for this isotope increased dramatically, as did its price.In the signed Letter of Intent, Solar System Resource Corporation Sp. z o. o. will deliver 500 kg (0.55 ton) of the helium-3 isotope by 2028-32, and US Nuclear Corp. will receive this delivery. The companies did not disclose the agreed price, but the current market price for helium-3 is 16.6 B$/ton. It is estimated that 1 kg of helium-3 in nuclear fusion with 0.65 kg of deuterium will provide about 19 MW of energy throughout the year, which means that 500 kg of helium-3 can produce 5 GW of clean, ecological energy 24 hours a day for one year for a major city (3+ million inhabitants). The value of the electricity produced would exceed 11 billion USD.The helium-3 isotope is found in very small amounts in natural helium, but there is little natural helium on Earth, and furthermore, it is not economical to produce this isotope from natural helium. All of the helium-3 resources we have on Earth are a by-product of nuclear weapons maintenance, which can theoretically provide about 300 kg of helium-3 and thus still produce about 15 kg of helium-3 per year. The total supply of strategic helium-3 in the US is about 29 kg, and another 187 kg has been mixed with stored natural gas - these resources are not renewable. The bottom line is that **there is a large shortage of helium-3 on Earth**, and with the current supply allocated for border security, there is none leftover for other uses. **However, helium-3 is 100 million more times abundant on the Moon where it has been captured over billions of years from solar winds. Furthermore, it is a renewable resource -** the solar wind is constantly depositing helium-3.

* Proof: Solar System Resources has agreed to provide 500 kilograms of helium-3 mined from the Moon to U.S. Nuclear Corp. in the 2028-2032 timeframe. https://docs.google.com/document/d/1nUkZto4ARa38K\_-0jENb9ZzV3E4UPbCK/edit

## CP Text: Commission Private entities for space cleanup efforts.

**Cleanup satellites are in progress**

**Weiner** 2021 (Chloe Weiner, March 21, 2021, “New Effort To Clean Up Space Junk Reaches Orbit,” NPR – National Public

Radio, https://www.npr.org/2021/03/21/979815691/new-effort-to-clean-up-space-junk-prepares-to-launch) //neth

**A** demonstration **mission to test** an idea to **clean up** space debris **launched** Monday morning local time from the Baikonur Cosmodrome in Kazakhstan. **Known as ELSA-d,** the mission will exhibit technology that could help capture space junk, the millions of pieces of orbital debris that float above Earth. The more than 8,000 metric tons of debris threaten the loss of services we rely on for Earth-bound life, including weather forecasting, telecommunications and GPS systems. The spacecraft works by attempting to attach itself to dead satellites and pushing them toward Earth to burn up in the atmosphere. ELSA-d, which stands for End-of-Life Services **by Astroscale**, will be carried out by a "servicer satellite" and a "client satellite" that launched together, according to Astroscale, **the Japan-based company** behind the mission. Using a magnetic docking technology, the servicer will release and try to "rendezvous" with the client, which will act as a mock piece of space junk. The mission, which will be run from the U.K., will carry out this catch and release process repeatedly over the course of six months. The goal is to prove the servicer satellite's ability to track down and dock with its target in varying levels of complexity. **The spacecraft is** not **designed to capture** dead satellites already in orbit, but rather **future satellites that would be launched with compatible docking plates on them.**

**Drag sail tech solves and private investment is key to development & launch**

**Hill 2020** (Rebecca Hill, February 24, 2020, “Passive space debris removal using drag sail deorbiting technology,” The Space

Review, https://www.thespacereview.com/article/3887/1) //neth

There are currently about 22,000 tracked objects in LEO, some of which are smaller than one centimeter. The focus of many current plans has been on the active removal of current debris. But with a projected 57,000 new satellites expected to launch by 2029, the

question becomes: how to prevent new debris? Currently, at Purdue University’s School of Aeronautics and Astronautics, David Spencer and his team are working on a passive debris removal system using drag sail deorbiting technology where these passive deorbiting systems are embedded within a spacecraft for deorbiting at the end of the spacecraft’s lifetime. Licensed by Vestigo Aerospace and funded through a Purdue University Research Foundation grant, Spencer and his team hope to launch a drag sail prototype with Texas-based Firefly Aerospace, no earlier than this April. Right now, Spencer is the project and mission of LightSail 2, a solar sail currently in orbit. According to Spencer, the **drag sail would launch within a satellite or attached to launch vehicle** upper stage. Once the vehicle reaches the end of its operational lifetime, the sail would deploy, using aerodynamic drag as a deorbiting force. **While traditional deorbiting requires burn maneuvers, a**

**passive deorbiting system works independently of spacecraft propulsion. Spencer believes the “sweet spot” for passive debris removal is for small satellites and launch vehicle upper stages in orbits between 500 and 900 kilometers.** They can be used up to an altitude of 1,000 kilometers, but above that altitude the size of the drag sail size increases dramatically, creating a risk of collision with other debris. I”t’s a big target, so to speak,” said Spencer. Thus, his team is concentrating right now on that sweet spot for drag sails with 1U and 3U cubesats. In many ways, drag sails are like solar sails. The sail material is thin. It is packed within a satellite, and carbon fiber booms stabilize the sail. However, while solar sails use the Sun’s photons for propulsion, photons destabilize a drag sail. To work, sail orientation must be face-on to the aerodynamic flow to achieve maximum drag. **In development are two types of sails. One is Spinnaker 1, a cubesat-class sail** 1.8-meters square that, when looking face-on, forms a square pyramid with an open funnel. “It’s a fairly small sail and effective for deorbiting cubesat spacecraft like the 10x10x10 centimeter satellite,” said Spencer. Up to 27U cubesats can be deorbited with a sail this size, says Spencer. The sail material is a transparent, Saran Wrap-like material called CP-1, tested and rated for a ten-year life span in geosynchronous earth orbit. The translucent material allows solar photons to pass through the material rather than being deflected, like it does with a solar sail. Spencer’s team is **also developing an 18-square-meter flat sail with booms three meters long, called Spinnaker 3.** With this large area, Spencer says **it can deorbit 400-kilogram satellites or launch vehicle upper stages from orbits as high as 600 kilometers**. This sail is scheduled to launch with Firefly Aerospace no earlier than April. With the transparent sail material came several challenges. Static cling made tightly folding the sail difficult, says Spencer. That same static cling could also create a buildup of static electricity on the deployed sail, he said, resulting “in an electrical arcing that could damage sensitive electronics in drag sail avionics.” Another concern involved ensuring that the sail resisted the pull of the three-meter carbon fiber booms to avoid tearing the sail on deployment. One critical aspect with the drag sail was the structural stiffness of the carbon fiber booms. “We wanted to make sure that the booms deployed in a repeatable fashion in their rigid configuration on deployment to achieve drag sail structural stability,” said Spencer. “It’s taken us a few iterations to get there, but we’ve done enough testing to look like everything is going well.” Rip stops built within the sail will also help decrease the probability of damage

in the event of a collision with space debris. “Micrometeoroids can pass through the sail material without minimal consequences and most likely would result in pinholes that wouldn’t have much impact,” said Spencer. However, larger debris could result in debris fragmentation, which is why, says Spencer, they needed to meet the 25-year deorbit guidelines and collision probability requirements. Aerodynamically, Spencer’s goal was stabilizing the **drag sail** design so it would trim to a maximum drag orientation. In multiple design simulations, Spencer’s team found that the sail achieved aerodynamic stability at low altitudes, below 400 kilometers. But above that, “the vehicle was basically tumbling,” he said, “which was okay because it will still provide more area and more rapid deorbit than it would without a sail.” Right now, Spencer **is looking to attract developers and launch vehicle companies.** But **the biggest user**, in Spencer’s opinion, **is the megaconstellations of communications satellites for global Internet services, where each satellite in the**

**constellation would require a drag sail unit.** “Vestigo Aerospace is designing our drag sails to have standard mechanical and electrical interfaces, resulting in straightforward integration with the host vehicle,” said Spencer. “For new spacecraft that are being launched today and in the future,” said Spencer, “having the capability to deorbit at the end of the mission makes sense.” As for reentry, drag sail technology uses a one-time deployment system, initiating at the end of the vehicle’s lifetime or before. One benefit of drag sails is that the host spacecraft need not be functional. A timer stored within the avionics unit will initiate deployment and can be updated as needed by the host spacecraft operator. Though Spencer’s team will not pursue targeted reentry objectives for these first two prototypes, his team is working on the option of deploying the drag sail when the host satellite is close to reentry, at an altitude of less than 200 kilometers. “The goal is to constrain the atmospheric entry corridor so that reentry occurs over unpopulated areas, away from highly trafficked air corridors,” said Spencer. NASA developed the Exo-Brake Parachute technology on the same principle. While the utility for drag sail is clearly apparent, Spence believes sooner or later that regulations will catch up to future space applications, requiring deorbiting systems. “For new spacecraft that are being launched today and in the future,” said Spencer, “having the capability to deorbit at the end of the mission makes sense.

### 

### **Case**

### **Response to Debris**

### **No impact & remediation’s not key—Nearly ZERO risk to any given satellite even ASSUMING cascades, Aff can’t solve it, and every other risk to spacecraft outweighs—Their ev makes several flawed assumptions Wein** 9 [Lawrence M. Wein, Professor & Senior Fellow at Stanford’s Center for International Security and Cooperation Jeffrey S. Skoll Professor of Management Science at Stanford University and Senior Fellow at Stanford’s Center for International Security and Cooperation, former DEC Leaders for Manufacturing Professor of Management Science at MIT, and Andrew M. Bradley, PhD-Institute for Computational and Mathematical Engineering at Stanford University, Space debris: Assessing risk and responsibility, Advances in Space Research 43 (2009) 1372–1390]

More importantly, while our numerical results mimic earlier results (Liou and Johnson, 2005; Walker and Martin, 2004) that stressed the importance of postmission deorbiting, we do not necessarily agree with the claim that the only way to prevent future problems is to remove existing large intacts from space (Liou and Johnson, 2006, 2008). The divergence between our views and those in Liou and Johnson (2006, 2008) is perhaps due to the different performance metrics used. The root causes for alarm in Liou and Johnson (2006, 2008) appear to be the growth rate of fragments and the small increase in the rate of catastrophic collisions over the next 200 years (Liou and Johnson, 2008, Fig. 2). However, **the great majority of catastrophic collisions in the SOI do not involve operational spacecraft,** and are hazardous only in the sense that the fragments generated from such a collision could subsequently damage or destroy operational spacecraft. Therefore, we introduced the notion of the lifetime risk of an operational spacecraft as the primary performance metric. Our model predicts that **the lifetime risk is** <5x10^-4 [**less than .0005%]** over the next two centuries, and always stays <10^-3 [less than .001%] than if there is very high (>98%) spacecraft deorbiting compliance.

### Long Timeframe **Lewis 15** [Hugh Lewis, Senior Lecturer in Aerospace Engineering https://room.eu.com/article/Space\_debris\_Kessler\_Syndrome\_and\_the\_unreasonable\_expectation\_of\_certainty]

There is now widespread awareness of the space debris problem amongst policymakers, scientists, engineers and the public. Thanks to pivotal work by J.C. Liou and Nicholas Johnson in 2006 we now understand that the continued growth of the debris population is likely in the future even if all launch activity is halted. The reason for this sustained growth, and for the concern of many satellite operators who are forced to act to protect their assets, are collisions that are expected to occur between objects – satellites and rocket stages – already in orbit. **In spite of several commentators warning that these collisions are just the start of a collision cascade that will render access to low Earth orbit all but impossible – a process commonly referred to as the ‘Kessler Syndrome**’ after the debris scientist Donald Kessler – **the reality is not likely to be on the scale of these predictions** or the events depicted in the film Gravity. Indeed, **results presented by the Inter-Agency Space Debris Coordination Committee** (IADC) at the Sixth European Conference on Space Debris **show an expected increase in the debris population of only 30% after 200 years with continued launch activity.** **Collisions are** still predicted to occur, but this is **far from the catastrophic scenario feared by some.** Constraining the population increase to a modest level can be achieved, the IADC suggested, through widespread and good compliance with existing space debris mitigation guidelines, especially those relating to passivation (whereby all sources of stored energy on a satellite are depleted at the end of its mission) and post-mission disposal, such as de-orbiting the satellite or re-orbiting it to a graveyard orbit. Nevertheless, the anticipated growth of the debris population in spite of these robust efforts merits the investigation of additional measures to address the debris threat, according to the IADC.

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### **Response to I-Law**

### **Even if corporations are covered by Article II of the Outer Space Treaty, the OST still does not support a blanket ban on appropriation. Wrench,** John G. “Non-Appropriation, No Problem: The Outer Space Treaty Is Ready for Asteroid Mining.” Case Western Reserve Journal of International Law 51:1. 2019. Web. December 12, 2021. <https://scholarlycommons.law.case.edu/cgi/viewcontent.cgi?article=2546&context=jil >.

Secondly, **even if nations, businesses, and individuals are equally bound by the non- appropriation principle,** the scope of that restriction is not entirely clear from the text of Article II.59 **It is unlikely, however, that the non-appropriation principle is an absolute ban on the ownership of resources extracted in outer space.** An interpretation of Article II supporting a blanket ban on resource ownership is unwarranted by the text of the OST and ill founded on account of the international community’s common practices. **Scholars have noted that the international community has never questioned whether scientific samples harvested from celestial bodies belong to the extracting nation**.60 Furthermore, **space-faring members of the international community rejected the Moon Treaty precisely because it prohibited all forms of ownership in resources extracted from celestial bodies**.61 The space-faring nations’ support for the OST, coupled with their rejection of an alternative set of rules governing extracted resources, is at the very least an indication of what those nations believe the non-appropriation principle to stand for. It is equally improbable that the international community drafted the non-appropriation principle to be merely idealistic rhetoric. The OST leaves no room for interpretations to squirm out from under its ban on sovereign claims of land.62 The following section illustrates, however, that **the distinction between sovereign ownership of land, and the vestment of property rights in resources extracted from that land, is nothing new**

**Amendment solves---the Aff depends upon a treaty in legal limbo--- clarifying that the OST does protect private appropriation sets clearer standards for states.**   
  
**MacWhorter 21,** Kevin. “Sustainable Mining: Incentivizing Asteroid Mining In The Name Of Environmentalism.” William & Mary Environmental Law and Policy Review 40:2. February, 2016. Web. December 12, 2021. .   
  
The OST already provides a framework in which a scheme of limited private property ownership in extracted asteroid minerals may be developed to incentivize private asteroid mining.236**The problem,** however, **is the ambiguity inherent in such a broad, idealistic treaty. The OST** therefore **must be amended to resolve all legal ambiguity. The problem with such an undertaking is the difficulty in getting all signatories to the amendment to agree.** The treaties that came after the OST were elaborations they more clearly define ambiguities and resolve any potential areas of dispute.238 With that in mind, **it is certainly reasonable to expect the international community to resolve the ambiguities surrounding the OST’s position on personal property in space.** Simplicity and a tried-and-true avenue for international space legislation is the best way to approach this issue. Amending the OST is fairly straight forward. **An amendment comes into force when it is accepted by a majority of the OST signatories, and it binds only those states that accept it.239 By doing this, the international community avoids the legal limbo of a treaty that has yet to reach customary status and avoids the failure of a treaty such as the Moon Treaty.**

**Response to Militarization**

**Space militarization deters space war – reducing bureaucracy is key – the aff**

**does the opposite of what’s needed**

**Lopez 2020** (“Space Force Chief: U.S. Doesn't Want War in Space, Must be Prepared for It,” C. Todd Lopez, September 15, 2020,

DOD News, <https://www.defense.gov/News/News-Stories/Article/Article/2348614/space-force-chief-us-doesnt-want-war-in-space-> must-be-prepared-for-it/) //neth

**The United States doesn't want to engage in warfare in space,** but like in all domains, the U.S. military must be prepared for such a conflict, and that'll take a lot of preparation and change,

Chief of Space Operations Gen. John W. Raymond, said. He said the U.S. does not want to get into a conflict that begins or extends into space. "**We want to deter that from happening.** However, if deterrence fails, a war that begins or extends into space will be fought over great distances at tremendous speeds," Raymond said. The chief of the newly-created Space Force spoke during a presentation that was part of the 2020 Air Force Association Air, Space and Cyber Conference,

held this year virtually as a result of the COVID-19 pandemic. **To plan for warfare** at the speeds and distances required to operate in space, the Space Force must be lean, agile and fast. The new military service has been working on all of those things since it stood up in December, Raymond said**. A big part** of the leaning effort, he said, **is the reduction of bureaucracy**. "Since establishment, we've been in the business of slashing bureaucracy, delegating authority and enhancing accountability at every crossroad," Raymond said. "My opinion: big organizations are slow. We must move at speed to outpace the threats that we face." The general said the Space Force, in an effort to reduce bureaucracy, implemented a large-scale reorganization that involved removing two echelons of command, including a numbered Air Force and an O-6-level command.

"We've also reduced the size of our planned staff at the Pentagon," Raymond said. "Back when we started, the Pentagon staff was going to be over 1,000 people. That was the initial plan. We've slashed that by 40%. We're shortening the distance between decision

makers and you, the experts, conducting our mission." Also part of eliminating bureaucracy, Raymond said, is a hard look at the agencies that exist now that are involved in acquisition for the space enterprise. He said Congress has identified some 65 different organizations involved in space-related acquisition. The Space Force chief said **there is a mandate for change,**

adding that **we must** bring unity of effort across the department, reduce duplication of effort, all

while **slashing** **costs**, and increasing our speed. "If we get this right, we will be the envy of the other services, because we are not tied to business of the past," Raymond said. The Space Force is also proposing a new acquisition system for space, something Raymond said Congress agrees with. "We've already begun implementing that," he said. "We've already delegated the head of contracting authority down from the Pentagon staff to the acquisition experts in the field. We know from experience this kind of delegation speeds up acquisition decisions, and makes us better partners for the industry." **Partnership is also key, both inside the Defense Department and outside. Partnerships with the intelligence community, sister services, the total force and space allies are all being looked at for development,** Raymond said. As part of partnership development, he said the Space Force established a chief partnership office at the Space and Missile System Center, and that team is working to expand space partnerships with nations such as Australia, Canada, Japan, New Zealand, the United Kingdom, France and Germany. Right now, he said, Space Force is working with Norway, for instance, to host American payloads on Norwegian space launches. That combined effort, he said, will save the U.S. about $900 million and also put those capabilities into space sooner. The U.S. is also working with the Japanese to put U.S. capabilities into Japanese satellites. "These efforts improve our capabilities, and they strengthen our partnerships between our great nations," he said. Raymond also drew attention to verbiage on a display at the World War II memorial in Washington, D.C. On the floors of both the north and south pavilions are etched the words "Victory on Land, Victory at Sea, Victory in the Air." Now, he said, those three

domains are no longer enough to ensure victory. Today's security environment, he said, requires even more of American

warfighters. "I am not confident that we can achieve victory or even compete in a modern conflict, without space power," he said. "I

am not willing to lose in order to learn. Today the Space Force in answering that call to compete, forging a warfighting service that is

always above."