## OFF

## extra t

#### a] interp – the aff must solely determine that the appropriation of outer space by private entities is unjust

#### Resolved means the act of determining something

Merriam Webster, https://www.merriam-webster.com/dictionary/resolution

1: the act or process of [resolving](https://www.merriam-webster.com/dictionary/resolve#h1): such as a: the act of analyzing a complex notion into simpler ones b: the act of answering : [SOLVING](https://www.merriam-webster.com/dictionary/solving) c: the act of determining d: the passing of a voice part from a [dissonant](https://www.merriam-webster.com/dictionary/dissonant) to a [consonant](https://www.merriam-webster.com/dictionary/consonant#h1) tone or the progression of a chord from [dissonance](https://www.merriam-webster.com/dictionary/dissonance) to [consonance](https://www.merriam-webster.com/dictionary/consonance) e: the separating of a chemical compound or mixture into its [constituents](https://www.merriam-webster.com/dictionary/constituent#h1) f(1): the division of a [prosodic](https://www.merriam-webster.com/dictionary/prosodic) element into its component parts (2): the substitution in Greek or Latin [prosody](https://www.merriam-webster.com/dictionary/prosody) of two short syllables for a long syllable g: the analysis of a [vector](https://www.merriam-webster.com/dictionary/vector#h1) into two or more vectors of which it is the sum.

#### b] violation:

#### c] vote neg:

#### 1] limits – they’re either extra t meaning they can add infinite planks to solve for neg args or effects t, which means any aff can be topical

#### a] they explode the topic since they can be as specific or vague as they want bc they’re no longer bound by the resolution

#### b] spec means generic da’s don’t link which decks neg ground, kills clash, causing random plan of the week affs which makes reciprocal prep impossible

#### 2] predictability – the res is the most predictable stasis point for debates, their counter interp justifies them picking literally any ground which decks neg ground and makes prep impossible

#### tva: ? wholerez aff w planks as advantages/net bens

#### paradigm issues:

#### 1] accessibility – it is literally impossible for me to cut nc’s to every possible aff, esp bc i am not from a big school like hwl which has multiple competitors and coaches helping cut prep in between rounds

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

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

#### a] also turns substance debate and time skew – u had infinite aff prep and chose to be non topical which force me to read theory bc its my only way of gaining offense

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

#### Link turns their education offense – getting to the third and fourth level of tactical engagement is only possible with refined and well-researched positions connected to the resolutional mechanism. Repeated debates over core issues incentivize innovative argument production and improved advocacy based on feedback and nuanced responses from opponents.

#### D] Fairness is an impact – [1] it’s an intrinsic good – some level of competitive equity is necessary to sustain the activity – if it didn’t exist, then there wouldn’t be value to the game since judges could literally vote whatever way they wanted regardless of the competing arguments made [2] probability – your ballot can’t solve their impacts but it can solve mine – debate can’t alter subjectivity, but can rectify skews [3] comes before substance – deciding any other argument in this debate cannot be disentangled from our inability to prepare for it – any argument you think they’re winning is a link, not a reason to vote for them, since it’s just as likely that they’re winning it because we weren’t able to effectively prepare to defeat it. This means they don’t get to weigh the aff.

#### Vote negative – A] this procedurally evaluates whether their model is good, which is a prior question B] they can’t get offense: we don’t exclude them, only persuade you that our methodology is best. Every debate requires a winner and loser, so voting negative doesn’t reject them from debate, it just says they should make a better argument next time.

## cp

#### Counterplan text: States should declare that public guardianship obligations created by the non-ownership doctrine necessitate a reduction in private actor appropriation of Outer Space.

#### The global commons upholds an anthropocentric lens of nature resources– further application can only strengthen exploitative relationships to nature – guardianship asserts the doctrine of non-ownership, which solves better and competes

Adler 05, Dean College of Law at Utah (Robert, The Law at the Water's Edge: Limits to ""Ownership"" of Aquatic Ecosystems, in Wet Growth: Should Water Law Control Land Use?, pg. 244)// recut katherine

I argue instead that the idea of a public “trust” should be replaced by one of public “guardianship.” In a classic trust, legal and equitable title are held by different persons, and the person with legal title has “equitable duties to deal with the property for the benefit of another person.” The trust duty is fiduciary and typically requires the trustee to maximize the income or other economic value of the trust assets for the beneficiary. This principle implies that if the trustee believes that a particular asset is better used for another purpose, or that certain trust values are more valuable than others from the perspective of the beneficiary, the trustee can manage the trust assets accordingly or even eliminate the resource entirely. Viewed again according to the underlying theory or property ownership, that landowners will make decisions that maximize the welfare value of the holding, public trust ownership solves some, but not all, of the market failure problems of private ownership. Under the expanded version of the public trust doctrine as interpreted by some courts, the trustee is now supposed to ensure that all common public values, including noncommodified environmental values that benefit the public in some way, are considered fully and appropriately and weighed against values that might benefit a subset of society or even an individual landowner disproportionately. If private market participants exert undue influence on the government’s decision process in the exercise of its trust, however, those decisions may not necessarily maximize overall welfare. Give the deference usually enjoyed by trustees absent clear violations of the trust duty, many courts are not likely to interfere with those judgements. Even absent such biasing of the trustee’s decision, a trustee may simply, in the exercise of its fiduciary judgement, **determine that the commercial value of a particular piece of trust property is more valuable to the beneficiary than its environmental value**, a decision more likely to be reviewed by courts from a procedural, rather than a substantive, perspective. Moreover, to the extent that trust resources provide ecosystem or other values or benefits that transcend the welfare of human societies, the public trust doctrine, - and **trust law in general** - is not even designed to incorporate those values.In fact, a public trustee arguably would violate its fiduciary **duty to the public beneficiary if it considered environmental values at the expense of the immediate** (current generation) public beneficiaries. One solution to that dilemma would be to consider the beneficiaries to include future as well as current generations of humans, but the inherently anthropocentric focus of the trust duty remains. Thus, while some courts have upheld government regulation and even prohibition of private development of land at the water's edge, under interpretations of the public trust doctrine and police power that affirm environmental stewardship duties; others have applied the doctrine as one that merely ensures that the trustee makes rational decisions after properly considering all trust values. 174 Other courts have ap­plied the doctrine to sanction the very economic development activities at the water's edge that cause such extensive aquatic ecosystem harm, such as the use of trust property for transportation systems, public utilities, oil production, and urban and commercial expansion. So long as the law considers aquatic species and other components of aquatic eco­systems to be "trust assets" to be managed entirely **for the benefit of human** economic and other welfare, aquatic ecosystems will remain vulnerable to continued impairment. A potentially more satisfying model, as discussed in the next section, is suggested by the evolution of wildlife law from one in which wildlife was similarly viewed as being "owned" by the state in trust for the people in common to one of "non­ownership." The non-ownership doctrine implies a corollary principle that the government is a guardian, rather than a trustee, of the resource and must exercise its legal responsibilities accordingly.

#### Nonownership solves better has a sound legal basis and effectively advances rights for nature – the aff maintains anthropocentric attitude to exploit nature

Adler 07, Dean College of Law at Utah (Robert, RESTORING COLORADO RIVER ECOSYSTEMS: A Troubled Sense of Immensity, pg. 199-200)

The public trust doctrine, however, retains the anthropocentric focus of property law in which “trust assets” are held by the government for the common benefit of human users. Perhaps the bigger problem is that the ecological values inherent in aquatic ecosystems are not amenable to either private or public ownership. The concept of “nonownership” has an equally long legal history, but has not received the same scholarly or judicial attention outside the arena of wildlife law. Some scholars read the original Roman law to mean that some common resources cannot be owned *at all*. Private individuals cannot “own” wildlife even if wild animals reside on their land. Individuals may own domesticated animals reduced to human control and wild animals reduced to physical possession through hunting or capture. No one can “own” a species, however, or even a population of wild animals. A rancher might own domesticated horses but not the wild mustangs grazing on her land. The U.S. Supreme Court clung for many years to the notion that states owned wildlife in trust for their people, but gradually abandoned this concept. In Missouri v. Holland, Justice Oliver Wendell Holmes questioned the idea that state "ownership" of birds that migrate across state lines could impair federal regulatory power: "To put the claim of the State upon title is to lean upon a slender reed. Wild birds are not in the possession of anyone; and possession is the beginning of ownership. The whole foundation of the State's rights is the presence within their jurisdiction of birds that yesterday had not arrived, tomorrow may be in another State and in a week a thousand miles away." In later cases the Supreme Court referred to the ownership concept as a "legal fiction" or "fantasy," and ultimately ruled that state authority to regulate wildlife is grounded in sovereign authority to protect common resources and the common welfare. It is not based on ownership. The nonownership principle conforms to a growing realization that nonhuman components of the natural world are not merely resources for human use and consumption, but have intrinsic value. Just as the law evolved in the 19th century to reject the idea that people could own slaves, law in the 20th century changed to conform with society's growing ethical rejection of human dominion over all other living species. At least since the early 1970s, some scholars began to propose legal rights for nonhuman species. The idea that wildlife cannot be owned also makes sense in light of the realization that species provide ecosystem services beyond those measured in the market economy. So what does this have to do with restoration of the Colorado River? No one claims ownership of razorback suckers or Yuma clapper rails. But private property rights at the water's edge limit the government's ability to restore the natural relationship between land and water. If inundation of private property constitutes an unconstitutional taking of property, modified dam flows that even periodically inundate riparian habitats or backwaters might be prohibited. Or, it might

## CASE

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

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

Kessler Syndrome is overhyped. A chorus of online commenters great any news of upcoming low earth orbit satellites with worry that humanity will to lose access to space. I now think they are wrong. What is Kessler Syndrome? Here’s the popular view on Kessler Syndrome. Every once in a while, a piece of junk in space hits a satellite. This single impact destroys the satellite, and breaks off several thousand additional pieces. These new pieces now fly around space looking for other satellites to hit, and so exponentially multiply themselves over time, like a nuclear reaction, until a sphere of man-made debris surrounds the earth, and humanity no longer has access to space nor the benefits of satellites. It is a dark picture. Is Kessler Syndrome likely to happen? I had to stop everything and spend an afternoon doing back-of-the-napkin math to know how big the threat is. To estimate, we need to know where the stuff in space is, how much mass is there, and how long it would take to deorbit. The orbital area around earth can be broken down into four regions. Low LEO - Up to about 400km. Things that orbit here burn up in the earth’s atmosphere quickly - between a few months to two years. The space station operates at the high end of this range. It loses about a kilometer of altitude a month and if not pushed higher every few months, would soon burn up. For all practical purposes, Low LEO doesn’t matter for Kessler Syndrome. If Low LEO was ever full of space junk, we’d just wait a year and a half, and the problem would be over. High LEO - 400km to 2000km. This where most heavy satellites and most space junk orbits. The air is thin enough here that satellites only go down slowly, and they have a much farther distance to fall. It can take 50 years for stuff here to get down. This is where Kessler Syndrome could be an issue. Mid Orbit - GPS satellites and other navigation satellites travel here in lonely, long lives. The volume of space is so huge, and the number of satellites so few, that we don’t need to worry about Kessler here. GEO - If you put a satellite far enough out from earth, the speed that the satellite travels around the earth will match the speed of the surface of the earth rotating under it. From the ground, the satellite will appear to hang motionless. Usually the geostationary orbit is used by big weather satellites and big TV broadcasting satellites. (This apparent motionlessness is why satellite TV dishes can be mounted pointing in a fixed direction. You can find approximate south just by looking around at the dishes in your northern hemisphere neighborhood.) For Kessler purposes, GEO orbit is roughly a ring 384,400 km around. However, all the satellites here are moving the same direction at the same speed - debris doesn’t get free velocity from the speed of the satellites. Also, it’s quite expensive to get a satellite here, and so there aren’t many, only about one satellite per 1000km of the ring. Kessler is not a problem here. How bad could Kessler Syndrome in High LEO be?Let’s imagine a worst case scenario. An evil alien intelligence chops up everything in High LEO, turning it into 1cm cubes of death orbiting at 1000km, spread as evenly across the surface of this sphere as orbital mechanics would allow. Is humanity cut off from space? I’m guessing the world has launched about 10,000 tons of satellites total. For guessing purposes, I’ll assume 2,500 tons of satellites and junk currently in High LEO. If satellites are made of aluminum, with a density of 2.70 g/cm3, then that’s 839,985,870 1cm cubes. A sphere for an orbit of 1,000km has a surface area of 682,752,000 square KM. So there would be one cube of junk per .81 square KM. If a rocket traveled through that, its odds of hitting that cube are tiny - less than 1 in 10,000. So even in the worst case, we don’t lose access to space. Now though you can travel through the debris, you couldn’t keep a satellite alive for long in this orbit of death. Kessler Syndrome at its worst just prevents us from putting satellites in certain orbits. In real life, there’s a lot of factors that make Kessler syndrome even less of a problem than our worst case though experiment. Debris would be spread over a volume of space, not a single orbital surface, making collisions orders of magnitudes less likely.Most impact debris will have a slower orbital velocity than either of its original pieces - this makes it deorbit much sooner.Any collision will create large and small objects. Small objects are much more affected by atmospheric drag and deorbit faster, even in a few months from high LEO. Larger objects can be tracked by earth based radar and avoided. The planned big new constellations are not in High LEO, but in Low LEO for faster communications with the earth. They aren’t an issue for Kessler. Most importantly, all new satellite launches since the 1990’s are required to include a plan to get rid of the satellite at the end of its useful life (usually by deorbiting) So the realistic worst case is that insurance premiums on satellites go up a bit. Given the current trend toward much smaller, cheaper micro satellites, this wouldn’t even have a huge effect. I’m removing Kessler Syndrome from my list of things to worry about.

#### Low altitude orbits zeroes risk of collision and doesn’t contribute to overall debris in dense areas – even if satellites fail no impact

Grush 18 – [Loren, “SpaceX wants to fly some internet satellites closer to Earth to cut down on space trash,” 10/9/2018, <https://www.theverge.com/2018/11/9/18016962/spacex-internet-satellites-space-debris-trash-orbit-closer-earth-distance-atmosphere>]

SpaceX is revising its satellite internet initiative, Starlink, and it now hopes to operate some of its spacecraft at a lower altitude than originally planned. In a new filing to the Federal Communications Commission (FCC), SpaceX is asking the agency to modify its license so that more than 1,500 Starlink satellites can operate at an altitude 600 kilometers lower than the company originally requested.

SpaceX argues that this change will make the space environment safer, as it will be easier to get rid of these satellites at this new altitude when they run low on fuel or can no longer function properly in orbit. This update could also explain the unexpected behavior of two of SpaceX’s test satellites for Starlink, which have remained in lower orbits than expected.

Back in March, the FCC approved SpaceX’s license for the first phase of its ambitious Starlink initiative — the company’s long-term plan to launch nearly 12,000 satellites into orbit to beam internet coverage down to Earth. Initially, SpaceX asked the FCC for permission to launch 4,425 satellites into orbits ranging between 1,110 to 1,325 kilometers high. But with this new filing, SpaceX is requesting that 1,584 of those satellites, which were supposed to operate at 1,110 kilometers, be allowed to operate at 550 kilometers instead.

SpaceX says moving the satellites to a lower altitude means it can do more with less. Originally, the company said it needed 1,600 satellites to operate at the 1,110-kilometer altitude, but moving them lower means the company can get the same results with 16 fewer spacecraft. And the lower altitude makes it easy to dispose of these satellites once they’re done in space. At this height, particles from Earth’s atmosphere bombard the spacecraft more rapidly, pushing them out of orbit and dragging them down to the planet. And on the way down, they burn up in the atmosphere.

Making sure these spacecraft come out of orbit in a timely manner is crucial because of the vast number of vehicles that SpaceX wants to put into orbit. A constellation the size of Starlink could dramatically increase the number of operational satellites in space, raising the risk of in-space collisions. A recent NASA study argued that 99 percent of these satellites will need to be taken out of orbit, reliably, within five years of launch, or the risk of satellite collisions goes up quite a bit.

De-orbiting a satellite typically entails bringing the vehicle to a low enough altitude with thrusters where Earth’s air particles and gravity drag the probe down so that it burns up. Now, with this new filing, SpaceX won’t have to significantly move 1,584 of its satellites to get rid of them. The atmosphere at 550 kilometers should do the job within a few years. That’s also helpful in case the spacecraft fails in orbit. Satellites that fail in higher altitudes could turn into unoperational space debris that stay in orbit for long periods of time. At lower altitudes, they can still fail, and the atmosphere will still swallow them up in a timely manner.

#### Probability – 0.1% chance of a collision.

Salter 16, Alexander William Salter, Economics Professor at Texas Tech, ’16, “SPACE DEBRIS: A LAW AND ECONOMICS ANALYSIS OF THE ORBITAL COMMONS” 19 STAN. TECH. L. REV. 221 \*numbers replaced with English words

The probability of a collision is currently **low**. Bradley and Wein estimate that the **maximum probability** in LEO of a collision over the lifetime of a spacecraft remains **below one in one thousand**, conditional on continued compliance with NASA’s deorbiting guidelines.3 However, the possibility of a future “snowballing” effect, whereby debris collides with other objects, further congesting orbit space, remains a significant concern.4 Levin and Carroll estimate the average immediate destruction of wealth created by a collision to be approximately $30 million, with an additional $200 million in damages to all currently existing space assets from the debris created by the initial collision.5 The expected value of destroyed wealth because of collisions, currently small because of the low probability of a collision, can quickly become significant if future collisions result in runaway debris growth.

#### Space debris is hype---there are thousands of satellites and only 15 debris collisions ever

Albrecht 16, Mark Albrecht 16, Chairman of the board of USSpace LLC & fmr. head of the National Space Council, “Congested space is a serious problem solved by hard work, not hysteria, 5/9/16, https://spacenews.com/op-ed-congested-space-is-a-serious-problem-solved-by-hard-work-not-hysteria/

There are over a half million pieces of human-made material in orbit around our planet. Some are the size of school buses, some the size of BB gun pellets. They all had a function at some point, but now most are simply space debris littered from 100 to 22,000 miles above the Earth. Yet, all behave perfectly according to the laws of physics. Many in the space community have called the collision hazard caused by space debris a crisis.Popular culture has embraced the risks of collisions in space in films like Gravity. Some participants have dramatized the issue by producing graphics of Earth and its satellites, which make our planet look like a fuzzy marble, almost obscured by a dense cloud of white pellets meant to conceptualize space congestion. Unfortunately, for the sake of a good visual, satellites are depicted as if they were hundreds of miles wide, like the state of Pennsylvania (for the record, there are no space objects the size of Pennsylvania in orbit). Unfortunately, this is the rule, not the exception, and almost all of these articles, movies, graphics, and simulations are **exaggerated and misleading**. Space debris and collision risk is real, but it **certainly** is **not a crisis.**So what are the facts?On the positive side, space is **empty** and it is **vast**. At the altitude of the International Space Station, **one half a degree** of Earth longitude is almost **40 miles long**. That same one half a degree at geostationary orbit, some 22,000 miles up is over 230 miles long. Generally, we don’t intentionally put satellites closer together than one-half degree. That means at geostationary orbit, they are no closer than 11 times as far as the eye can see on flat ground or on the sea: That’s the horizon over the horizon 10 times over. In addition, other than minute forces like solar winds and sparse bits of atmosphere that still exist 500 miles up, **nothing gets in the way of orbiting objects** and **they behave quite predictably**. The location of the smallest spacecraft can be predicated within a 1,000 feet, 24 hours in advance.Since we first started placing objects into space there have been 11 known low Earth orbit collisions, and three known collisions at geostationary orbit. Think of it: 135 space shuttle flights, all of the Apollo, Gemini and Mercury flights, **hundreds** of telecommunications satellites, **1,300 functioning satellites** on orbit today, **half a million** total objects in space larger than a marble, and **fewer than 15 known collisions**. **Why** do people **worry?**

#### No one’s going to war over a downed satellite

Bowen 18 [Bleddyn Bowen, Lecturer in International Relations at the University of Leicester. The Art of Space Deterrence. February 20, 2018. https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/]

Space is often an afterthought or a miscellaneous ancillary in the grand strategic views of top-level decision-makers. A president may not care that one satellite may be lost or go dark; it may cause panic and Twitter-based hysteria for the space community, of course. But the terrestrial context and consequences, as well as the political stakes and symbolism of any exchange of hostilities in space matters more. The political and media dimension can magnify or minimise the perceived consequences of losing specific satellites out of all proportion to their actual strategic effect.

#### They have zero solvency for corporate colonialism—global comms is about restricting nations, nothing is unique to private companies. Which means that private companies can still exploit these resources long as governments are being regulated. Priv comps can still exploit resources regardless

#### Even you don’t buy that, global commons gets circumvented: Space cooperation doesn’t lead to broader relations – empirics prove

Sterner 15 (Eric Sterner is a fellow at the George C. Marshall Institute. He held senior staff positions for the U.S. House Science and Armed Services committees and served in DoD and as NASA’s associate deputy administrator for policy and planning, “Talk and Cooperation in Space” 8/6/2015 <https://spacenews.com/op-ed-china-talk-and-cooperation-in-space/>)

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