### 1

#### Interp: The affirmative must eliminate private claims of ownership in outer space not merely restrict appropriation for particular uses.

#### This is the distinction between the non-appropriation principle and regulations on the use of space. Easy test – if the aff allows the same piece of space to be appropriated for a different use case, or under different conditions, it’s not topical.

Wrench 19 [John G. Wrench, Non-Appropriation, No Problem: The Outer Space Treaty Is Ready for Asteroid Mining, 51 Case W. Res. J. Int'l L. 437 (2019) <https://scholarlycommons.law.case.edu/jil/vol51/iss1/11>]

The non-appropriation doctrine restricts parties from making sovereign claims over underlying land—the same restriction embedded in each of previous section’s legal regimes. Without violating the nonappropriation principle, those regimes grant parties the right to extract resources from land they do not own, transfer that right, and limit wasteful use. Each system similarly vests an entity with the authority to regulate and enforce those rules. With some tailoring, those rules could graft onto the uniqueness of outer space resource extraction. The property regimes explored in Part II do not provide answers for all claims likely to arise in cases involving outer space resource extraction. One looming issue is that some attempts at resource extraction are bound to straddle the line between use and sovereign claims over land. For example, in instances where parties continually seek extensions on mining permits (to the exclusion of others) or take blatant steps to unreasonably exclude other parties from nearby locations. Those seeking to preserve the line between use and ownership would be wise to police it. Answers to these granular regulatory questions will require some regulatory flexibility, but these issues are only different in scale from those addressed by our existing property regimes.

#### Prefer it -

#### Ground—To restrict private property rights in outer space they would have to create private property rights in space because there currently are none. All negative positions have to be based on private property rights being good so they can delink any disad. The most equitable division of ground is that the aff bans and the neg regulates

#### Shiftiness—The aff just defends restricting property rights in space so they become a moving target in the 1ar. If I say that they don’t solve because they don’t eliminate property rights, they will say that the restrictions are big and if I read a disad based on private property rights being good they will say that the restrictions will be tiny

#### Drop the debater to preserve fairness and education – use competing interps – reasonability invites arbitrary judge intervention and a race to the bottom of questionable argumentation. No RVIs – they don’t get to win for following the rules.

1. Reciprocity doesnt make sense — we have to negate the aff- they have to be topical— different burdens
2. No, their interp is the def of biderectionality- they say some property rights good
3. Engagement— false focuses on bad substantive education which means it means impossible for the neg to engage— CI is better allows the neg to engage

### Short - Interp - Real World

#### Interpretation: the negative can run 2 conditional position(s).

#### Prefer it on real world decision making – one would either reject the aff if a counterplan were better or if the status quo was better. This means that the neg should be able to defend the status quo and a counterplan in a simulation of real world decision making.

#### Use reasonability because competing interps incentives frivolous theory and causes substance crowd-out – err neg because of aff side bias since they get to go first and last – new 2AR weighing makes theory debates impossible for the neg because I have no 2NR so hold them to what they said in the 1AR

### 2

#### Counterplan: Space faring nations should enter into a prior and binding consultation with the International Court of Justice over whether the anti-competitive appropriation of outer space by private entities violates its obligations under the Outer Space Treaty and its succeeding treaties.

#### Advisory opinions from ICJ are necessary to clarify and develop international space law and they say yes

Simpson and Johnson 17 [Michael Simpson, International Space University · Space Policy and Law; Business and Management, Chris Johnson is the Space Law Advisor at the Secure World Foundation, a non-governmental organization (NGO) focused on the sustainable uses of outer space. Christopher does research, writes, and speaks about international and national space law with a special focus on peaceful uses of outer space, emerging governance challenges with non-traditional space activities, and identifying and characterizing deficiencies in existing space law., September 2017, Lacunae and Silence in International Space Law – A Hypothetical Advisory Opinion from the International Court of Justice, ResearchGate, https://www.researchgate.net/publication/320596144\_Lacunae\_and\_Silence\_in\_International\_Space\_Law\_-\_A\_Hypothetical\_Advisory\_Opinion\_from\_the\_International\_Court\_of\_Justice 12-16-2021] rohan

* lacunae = situation where there is no applicable law
* non liquet = no answer from governing system

Since international space law has developed for at least 60 years in an environment devoid of judicial opinions on live controversies, it lacks the judicial contribution to clarification and elaboration of terms and principles normally enjoyed by a body of law. For this reason, advisory opinions may be particularly useful in this area. The mechanism for seizing the Court also appears to be favorably developed. In the nuclear weapons case, the ICJ turned down a 1993 request from the World Meteorological Organization on the grounds that WMO, acting ultra vires lacked standing. Only when the UN General Assembly later made the request in its own name did the Court take up the question.

Since many of the questions amenable to illumination through advisory opinions are within the remit of the UN Committee for the Peaceful Uses of Outer Space (UNCOPUOS), which itself reports through Fourth Committee to the General Assembly, the procedural pathway to a UNGA request is both established and clear. Equally as helpful is that UNCOPUOS operates by consensus. Thus, early requests for clarification, could easily establish that the necessary political will to seek increased clarity was present and permit to begin with less controversial concepts. Once the efficacy of advisory opinions to clarify elements of space law is established, the General Assembly could possibly decide to forward more challenging issues even where consensus in COPUOS could not be expected.

III. NON-LIQUET AT THE ICJ.

It is a general principle of law at both the national and international level (indeed inherited from ancient Roman law) that when asked to deliver a judgement, a court knows the law (Iura novit curia). So it should seem as an unexpected and rare surprise when a court does not, indeed, know the law. In the Nuclear Weapons advisory opinion, the Court considered the existing law applicable to the threat or use of nuclear weapons, and their treatment under the various sources and bodies of law. The Court was asked to consider “is the threat or use of nuclear weapons in any circumstances permitted under international law?” However, the Court slightly rephrased that question merely to “determine the legality or illegality of the threat or use of nuclear weapons.”11 In seeking an answer, the Court looked to custom and to treaties, and looking to a diverse field of special regimes of international law, including the law of armed conflict (LOAC) a.k.a. International Humanitarian Law (IHL) (including jus ad bellum and jus in bellow), environmental law, and human rights law. However, the law, as a system and as a whole, was weighed and found wanting. The Court concluded:

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Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports (1996) p. 226, 238 para.

97. Accordingly, in view of the present state of international law viewed as a whole, as examined above by the Court, and of the elements of fact at its disposal, the Court is led to observe that it cannot reach a definitive conclusion as to the legality or illegality of the use of nuclear weapons by a State in such circumstance of self-defense, in which its very survival would be at stake.

Non liquet, meaning, it is not clear, is where a court finds the law insufficient, and does not permit a conclusion one way or the other regarding the issue it is presented with.

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IV. SPACE LAW, LACUNAE, AND NON-LIQUET

The idea that gaps in the law or uncertainty with its provisions can render judicial decisions impossible, difficult, or unwise is at least as old as Roman law. As such the concepts of lacunae and non liquet still bear the Latin names that would have been familiar to lawyers and legal scholars throughout the Roman Empire. As explained by Mark Bogdansky, non liquet can be extended to cover both the case where no legal rule can be found that applies to a case under consideration and to the case where lack of clarity in the facts or in a principle of law makes it impossible to discern clearly the implications of that principle in light of the facts presented. Bogdansky refers to the former situation as ontological non liquet and to the latter as epistemological. We will use lacunae to refer to apparent gaps in international space law and will confine our use of “non liquet” to situations where a principle has been articulated but is not clear.

Definitions become extremely important in discussing the impact of lacunae and non liquet on international space law. Note for example the list of lacunae in José Monserrat Filho’s excellent paper, “Space Law In The Light Of Bobbio's Theory Of Legal Ordering,” IAC-12.E7. 5. 6.

1. Definition of “space object”, “space debris”, “space activities”, “space launching”;

2. Binding “Space Debris Mitigation Guidelines”;

3. Prohibition of all kind of weapons in Earth orbits;

4. Definition and delimitation of the outer space;

5. Regulation of commercialization of space activities;

6. Environmental damage in Liability Convention;

7. Industrial exploitation of lunar natural resources;

8. Remote sensing activities in the XXI century;

9. Satellite data as evidence in criminal proceedings;

10. The use of nuclear power sources in space;

11. The human presence in space.

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While items 2, 3, 6, and 11 fit clearly into our definition of lacunae, the others represent cases where legal principles have been articulated, but are subject to substantial disagreement as to their application to various fact situations. Where lacunae exist, the utility of advisory opinions is greatly constrained. The foundational principles of positivism and sovereignty that are key pillars of international law do not lend themselves to judicial activism in creating legal rules in the absence of political action to create them. On the other hand, where a situation of non liquet emerges from disagreement over definitions or the application of a legal principle to a particular situation, an advisory opinion could have either one of two beneficial outcomes.

In the first case an advisory opinion could clarify the meaning of terms where uncertainty exists. This situation would require strong arguments to support the opinion and justify it. It might be elaborated on the basis of original intent reflected in the travaux préparatoires, clear patterns of application of terms and principles in the action of States parties to the agreements where uncertainty exists or lack of clarity is perceived, or lucid reasoning by analogy to similar situations where greater certainty can be demonstrated.

The second case could result from an opinion that clarification cannot be provided and that the matter remains non liquet. In this case, there would be an unambiguous signal that political/ diplomatic action would be required to clarify the issues in dispute. Take for example the hypothetical example of a case seeking clarification of the non-appropriation clause of the Outer Space Treaty. A non liquet in such a case would leave those wishing to assert that a prohibition against off Earth mining existed in international law without a legal vindication of their position while those wishing to engage in such mining would face uncertainty because the Court had not ruled definitively that non appropriation did not apply to them. Since the mining advocates would be ~~handicapped~~ by uncertainty in their approaches to potential investors, both sides would have an incentive to seek a political resolution with the compromises that was likely to entail.

#### International space legal regime are needed to solve space war --- malleable laws are key in outer space

Hart 21 [Amalyah Hart, Amalyah Hart is a science journalist based in Melbourne, 11-19-2021, "Do we need new space law to prevent space war", Cosmos Magazine, https://cosmosmagazine.com/people/society/space-law-to-prevent-space-war/] simha

The week before last, a UN panel approved the creation of a working group to discuss next-generation laws to prevent the militarisation of space. The move comes as space 2.0 seems to be going into hyper-drive, with countries and corporations racing to claim their stake in the final frontier. It’s timely, as the potential for friction is gathering by the day, with China, India, Russia and the US testing anti-satellite missiles on their own satellites and creating worrisome clouds of debris. This week’s destruction by Russia of its “dead” satellite, Cosmos 1408, underlined the issue. Meanwhile, the orbital space around Earth is becoming jammed with machinery; currently, there are 3,372 active satellites whizzing around Earth, but in one or two decades that number is set to leap to potentially 100,000 or more. And that’s ignoring the space stations, telescopes and spyware already in orbit as countries flex their aerospace muscles. It’s a cosmic fracas. And contested territory is prime fodder for international disputes, as we know. It’s these kinds of disputes the group of UK diplomats who proposed the UN motion want to prevent, by coming to an agreed-upon set of norms for behaviour in space. Space law: what are the issues at stake? The current international framework for law in space is the UN’s 1967 Outer Space Treaty (OST), which sets governing principles for the exploration of space, including that space should be free for use by all nations, that celestial bodies like the Moon should be used exclusively for peaceful purposes, and that outer space should not be subject to national appropriation. Under international law, any and all objects being launched into space must be registered to avoid collisions. On top of these global laws, each nation-state has its own legal framework around the registering and launching of objects into space. But as technology evolves and new opportunities arise, are these old laws equipped to govern new problems? The UN’s 1967 Outer Space Treaty sets governing principles for the exploration of space, including that space should be free for use by all nations. “There exists an incredible amount of applicable law already, and it has served us really well,” says space law expert Steven Freeland, an emeritus professor at Western Sydney University and professorial fellow at Bond University. Freeland is vice-chair of a UN Committee on the Peaceful Uses of Outer Space (COPUOS) working group that is developing laws around the exploitation of resources in space. “There’s a lot of law at the multilateral level that then filters down to other layers of bilateral or ‘minilateral’ agreements and national laws. But clearly things move so quickly with technology, we’re doing so many more things in space that were beyond the contemplation of the drafters of the original treaties. Ideally we need more.” Freeland says there are myriad complex, interconnected issues in space that need tighter laws. These include the increasing militarisation of space; the proliferation of satellites, which can lead to overcrowding of “popular” orbits and increased demand for radio-wave spectra; ethical issues around human spaceflight; and the possible extraction of resources on celestial bodies like the Moon. Resource exploitation It might sound like science fiction, but mining in outer space is looking increasingly likely in the not-too-distant future. In September 2020, NASA announced that it would award contracts to private companies for the extraction and purchase of lunar regolith (rock matter) from the surface of the Moon, which could be mined and then studied in situ by the company, before the data and rights are transferred to the space agency. The move heralds what our space-based future might look like, with private companies mining celestial bodies for their precious resources. In our solar system, composed of millions of celestial bodies both large and small, the opportunities for cashing in look potentially endless – provided technology advances to the level of practical spaceflight. “Most wars on Earth have historically been fought over a quest for resources,” says Freeland, “so it’s incredibly important [to have appropriate space laws].” Just last month, scientists announced the discovery of two extraordinarily metal-rich near-Earth asteroids (NEAs), comprised of roughly 85% metals like iron, nickel and cobalt, which are thought to exceed Earth’s entire known metallic reserves. These three highly valuable metals, often known as the “iron triad”, are particularly critical for the energy supply chain and a renewable energy future; they’re used to build lithium-ion batteries, electrochemical capacitators for storing energy, and nano-catalysts for use in the energy sector. Under the OST, outer-space resources cannot be appropriated by nations, but the law and principle around the commercial use of space resources is less clear. The 1979 Moon Treaty holds that any celestial body is under the jurisdiction of the international community and therefore subject to international law. The treaty outlaws the military use of any celestial body as well as providing a legal framing for the “responsible” exploitation of celestial resources. But, to date, no space-capable nation has ratified the treaty. Militarisation That brings us to the militarisation of space. As technology advances, the potential avenues for weapons that cross the border from terrestrial to cosmic continue to proliferate. So, what laws protect us from a space war? “The issues about security in space have historically been dealt with by the CD, the Conference of Disarmament, but more recently the UK has led discussions at the United Nations that effectively seek to change the diplomatic language and thinking about space security,” says Freeland. Currently, the principles for governing space under the OST forbid the military use of space, but space is already used for military purposes such as surveillance, and some missiles carve a path through outer space on their journeys to their targets. As it currently stands, the only weapons found in space are the TP-82 Cosmonaut survival pistols that Russian astronauts regularly take on board the Soyuz spacecraft, intended to protect them from a potential wild animal attack if they are forced to emergency land in “off-the-map” territory. But as technology proliferates, the opportunities for space-based militarisation also grow. The existing laws were drafted long before many of these technologies were even dreamed up. The most worrisome technologies currently being trialled are anti-satellite missiles. “We have this strategic competition going on amongst the major powers,” says Gilles Doucet, a space security consultant based in Canada who worked for 35 years with the Canadian Department of National Defence. Doucet is both an engineer and an expert in space law. “They all wish to be dominant and make sure that their national security is secured by controlling, or at least not having other people control, outer space.” But what kinds of defence technologies are being developed in space? Doucet says the most worrisome technologies currently being trialled are anti-satellite missiles of the sort that Russia deployed earlier this week. Known as direct-ascent anti-satellite missiles (DA-ASAT), they can destroy satellites in low Earth orbit. “This essentially looks a lot like ballistic missile defence, but it’s happening in outer space against satellites,” he says. In fact, DA-ASAT technology is dependent on the same technology used for midcourse ballistic missile defence – the technology that the US, for example, deploys to defend itself from potential ballistic missile attacks on North America. These missiles fly at altitudes of around 3,000 to 4,000 kilometres, well within the low-Earth orbit many satellites operate in. This technology is being developed and tested by the US, China, India and Russia. “Destroying another country’s satellites would only occur in an armed conflict scenario,” Doucet says. “It would be because the other country’s satellite is providing an important military role – for example, a GPS satellite for directing munitions or an imagery satellite for locating your forces.” Other military applications in space, Doucet says, include the jamming of satellite communications and navigation, as well as interference with some GNSS signals, of which GPS – the satellite navigation system we all use for things like Google Maps – is one. Satellite jamming can have major disruptive potential. “You might be conducting an operation in a conflict – let’s say you wish to target a certain facility. Your missile system or your drone-launching missiles rely on GPS to guide them,” Doucet says. “So if you’re on the other end of it wanting to protect yourself, then you’ll send out jamming signals.” But while these signals can help defend a military target, Doucet says many satellites provide services for military and civilian companies and organisations at once. In this case, jamming a satellite’s signal may also interfere with civilian services it provides, including aircraft and ship navigation, car mapping, even timing signals for financial transactions. This means satellite jamming has major disruptive potential. And there are other areas where satellite technology could have duplicitous or combative potential. “Close proximity operations seem to get countries a bit upset,” says Doucet. Close proximity operations, as the name suggests, involve satellites moving close to other satellites. “One reason might be intelligence or inspection, just to take close images to understand how it’s built. But you may be getting close to intercept signals or to interfere with signals. “So that is a concern, because it’s one thing to get close for passively collecting information, but if you’re close you may also be in a position to interfere.” What might new space law systems look like? “We have a lot of space systems that are dual use, that have the potential to do harm,” Doucet says. “I’d like to see some transparency on the mission, on what you’re doing, to help alleviate concerns. “That might sound like a small step, but to militaries it’s actually a really big step to provide transparency.” Doucet says he’d also like to see clarification of the existing principles for space law already set out in the OST and other treaties. In fact, he’s currently working on the MILAMOS Project, developing a Manual on International Law Applicable to Military Uses of Outer Space at Canada’s McGill University. “I would like to see the existing legal regime being given a bit of life,” he says. “We’ve got tremendously good outer space principles, but over several decades countries have kind of refused to give them life because it’s too controversial. “The third thing I’d like to see is the major space powers sit down and talk. They’re all potentially losers if this keeps going down this path. I don’t think there’s a winner in a space war.” For all these complex problems, Doucet is cautiously optimistic about our chances of avoiding a space war. “I don’t think the issue about space security is as unique as people think,” he says. “Yes, it’s a very unique domain, but the actors are all the same, the interests are all the same. It’s the same people that have struggled over ballistic missile proliferation, nuclear weapons proliferation, treaties about the high seas, about aviation and all kinds of things. “So, we shouldn’t think this is an unsolvable problem. We may take lessons from how we’ve managed to agree to disagree in other areas beyond national jurisdiction.” Freeland agrees that even if international tensions may simmer at home, it’s in the best interest of major global powers to come to agreements about laws in space. “When it comes to these really big issues, particularly issues that have the propensity to go horribly wrong if we follow an irresponsible path, in the end it’s in [governments’] common interest to agree to the rules of the road,” he says. “The important element is that they have had the opportunity to buy in on the framing of those rules.“I think we need to be optimistic. With a great deal of caution, cool heads will prevail.”

### 3

#### TEXT: The Outer Space Treaty ought to be amended to establish an international legal trust system governing outer space.

#### The Legal trust would include private property rights and would ensure the sustainable development as well as the equitable distribution of space resources.

Finoa ’20 – Ivan Finoa [Department of Law, University of Turin], “An international legal trust system to deal with the new space era,” 71st International Astronautical Congress (IAC) – The CyberSpace Edition, (12-14 October 2020). <<https://d1wqtxts1xzle7.cloudfront.net/66728932/_IAC_20_E7.VP.8.x58518_An_international_legal_trust_system_to_deal_with_the_new_space_era_BY_IVAN_FINO-with-cover-page-v2.pdf?Expires=1642044926&Signature=asvt6StaK5n9UnpXuJIlo4ziI839WzFYjDZy37bm70ObGy3vFJyHwWNGxhn2beze4QzYDPPX0pVEXAwYvDaINVNxN01Ify8YwG5loNRddlat-grf3iawic7KvwqPowxFe2GuemVvbB-KW8ZVBxigwS-gelSKIVy4KYR9UgiDrM6e6deEBnUTcULSwmsH-JdHNg13ytZ3vNVMMlxZW2MPOCRuB2WlOHdCLoC86VqafSoMwuec-d~Aisbgyt5F2vO-GjvI60bR7h2MSp0iT6P7apIDUUpHUsDGbvcdxp22HSxXdlvr7lSqtLnL5rKxujGDYq~R9B~WuGiorVL2hn74UQ__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA>>CT

Considering the worsening climate change, in the future outer space might be our last Noah’s Ark. Now, humans must look to space as an opportunity to support growing resource requirements. Asteroids are rich in metals, which could be transported back to Earth. Unfortunately, the existing international legal framework discourages investments in the space economy. Once an enterprise invests billions of dollars in discovering and developing a mining site, it cannot claim any ownership because of the non-appropriation principle stipulated in Article 2 of the Outer Space Treaty (OST). Thus, other entities could legally access and exploit the same resource without any participation in the initial financial investment, increasing the risk of potential conflict. Bearing this in mind, the question arises, which legal regime could ensure effective allocation of resources, avoiding a chaotic space race to acquire valuable assets? The aim of this research is to argue that the first two articles of OST should be amended, to set up an international legal trust system which would guarantee different kinds of rights, dependently on the nature of the celestial body. E.g., property rights could be preferable to a lease over asteroids, as they could be exploited to their disappearance. This proposed system would be led by the United Nations Office for Outer Space Affairs (UNOOSA), as the main trustee. The co-trustees would be the nations of the world. Prior to initiating any space activity, every entity would send a request to their national government. If all the legal parameters are respected, the nation would forward the operational request to the UNOOSA. In the case of acceptance, UNOOSA would record the permit on an international public registry. The country in which the company has been registered would investigate whether the activities of its national company are consistent with the permit. This would be the ordinary model. The extraordinary model would be when the applicant for the space activity is a state, then the trustee would be the UN. All lucrative activities would be subject to benefit-sharing. Finally, this research will demonstrate the valuable outcome of the International Legal Trust System and its advantages for all humankind. Private companies would rely on property rights, while the benefit-sharing could be used to finance the 17 Sustainable Development Goals adopted by the UN in 2015, which address peace, climate change, inequalities and poverty.

### 4

#### Decreasing competitive practices scares investors away and spills over to other space activities. Freeland 05

Steven Freeland (BCom, LLB, LLM, University of New South Wales; Senior Lecturer in International Law, University of Western Sydney, Australia; and a member of the Paris-based International Institute of Space Law). “Up, Up and … Back: The Emergence of Space Tourism and Its Impact on the International Law of Outer Space.” Chicago Journal of International Law: Vol. 6: No. 1, Article 4. 2005. JDN. <https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1269&context=cjil>

V. THE NEED FOR CELESTIAL PROPERTY RIGHTS? ¶ The fundamental principle of "non-appropriation" upon which the international law of outer space is based stems from the desire of the international community to ensure that outer space remains an area beyond the jurisdiction of any state(s). Similar ideals emerge from UNCLOS (in relation to the High Seas) as well as the Antarctic Treaty, 42 although in the case of the latter treaty, it was finalised after a number of claims of sovereignty had already been made by various States and therefore was structured to "postpone" rather than prejudice or renounce those previously asserted claims.43 In the case of outer space, its exploitation and use is expressed in Article I of the Outer Space Treaty to be "the province of all mankind," a term whose meaning is not entirely clear but has been interpreted by most commentators as evincing the desire to ensure that any State is free to engage in space activities without reference to any sovereign claims of other States. This freedom is reinforced by other parts of the same Article and is repeated in the Moon Agreement (which also applies to "other celestial bodies within the solar system, other than the earth")." Even though both the scope for space activities and the number of private participants have expanded significantly since these treaties were finalised, it has still been suggested that the nonappropriation principle constitutes "**an absolute barrier** in the realization of every kind of space activity., 4 ' **The amount of capital expenditure required to research, scope, trial, and implement a new space activity is significant.** To bring this activity to the point where it can represent a viable "stand alone" commercial venture **takes many years and almost limitless funding.** From the perspective of a private enterprise contemplating such an activity, it would quite obviously be an important element in its decision to devote resources to this activity that it is able to secure the highest degree of legal rights in order to protect its investment. **Security** of patent and other intellectual property rights, for example, are vital prerequisites for private enterprise research activity on the ISS, and these rights are specifically addressed by the ISS Agreement between the partners to the project and were applicable to the experiments undertaken by Mark Shuttleworth when he was onboard the ISS.46

#### Chinese investments are catching up and the US needs private companies to maintain space dominance – Chinese space dominance risks extinction. Autry and Kwast 19:

Greg Autry, Steve Kwast {Greg Autry is 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 Kwast is 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., }, 19 - ("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/)//marlborough-wr/

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](https://www.whitehouse.gov/briefings-statements/remarks-president-trump-meeting-national-space-council-signing-space-policy-directive-3/), “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](https://foreignpolicy.com/2019/04/02/beijing-is-taking-the-final-frontier-space-china/) 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](https://www.diu.mil/news-events), 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.