### 1

#### The US commercial space industry is booming – private space companies are driving innovation.

**Lindzon 21** [(Jared Lindzon, A FREELANCE JOURNALIST AND PUBLIC SPEAKER BORN, RAISED AND BASED IN TORONTO, CANADA. LINDZON'S WRITING FOCUSES ON THE FUTURE OF WORK AND TALENT AS IT RELATES TO TECHNOLOGICAL INNOVATION) "How Jeff Bezos and Elon Musk are ushering in a new era of space startups," Fast Company, 2/23/21, https://www.fastcompany.com/90606811/jeff-bezos-blue-origin-elon-musk-spaces-space] TDI

In early February, Jeff Bezos, the founder of Amazon and one of the planet’s wealthiest entrepreneurs, dropped the bombshell announcement that he would be stepping down as CEO to free up more time for his other passions. Though Bezos listed a few targets for his creativity and energy—The Washington Post and philanthropy through the Bezos Earth Fund and Bezos Day One Fund—one of the highest-potential areas is his renewed commitment and focus on his suborbital spaceflight project, Blue Origin. Before space became a frontier for innovation and development for privately held companies, opportunities were limited to nation states and the private defense contractors who supported them. In recent years, however, billionaires such as Bezos, Elon Musk, and Richard Branson have lowered the barrier to entry. Since the launch of its first rocket, Falcon 1, in September of 2008, Musk’s commercial space transportation company SpaceX has gradually but significantly reduced the cost and complexity of innovation beyond the Earth’s atmosphere. With Bezos’s announcement, many in the space sector are excited by the prospect of those barriers being lowered even further, creating a new wave of innovation in its wake. “What I want to achieve with Blue Origin is to build the heavy-lifting infrastructure that allows for the kind of dynamic, entrepreneurial explosion of thousands of companies in space that I have witnessed over the last 21 years on the internet,” Bezos said during the Vanity Fair New Establishment Summit in 2016. During the event, Bezos explained how the creation of Amazon was only possible thanks to the billions of dollars spent on critical infrastructure—such as the postal service, electronic payment systems, and the internet itself—in the decades prior. “On the internet today, two kids in their dorm room can reinvent an industry, because the heavy-lifting infrastructure is in place for that,” he continued. “Two kids in their dorm room can’t do anything interesting in space. . . . I’m using my Amazon winnings to do a new piece of heavy-lifting infrastructure, which is low-cost access to space.” In the less than 20 years since the launch of SpaceX’s first rocket, space has gone from a domain reserved for nation states and the world’s wealthiest individuals to everyday innovators and entrepreneurs. Today, building a space startup isn’t rocket science. THE NEXT FRONTIER FOR ENTREPRENEURSHIP According to the latest Space Investment Quarterly report published by Space Capital, the fourth quarter of 2020 saw a record $5.7 billion invested into 80 space-related companies, bringing the year’s total capital investments in space innovation to more than $25 billion. Overall, more than $177 billion of equity investments have been made in 1,343 individual companies in the space economy over the past 10 years. “It’s kind of crazy how quickly things have picked up; 10 years ago when SpaceX launched their first customer they removed the barriers to entry, and we’ve seen all this innovation and capital flood in,” says Chad Anderson, the managing partner of Space Capital. “We’re on an exponential curve here. Every week that goes by we’re picking up the pace.”

#### The plan creates a restriction that encourages companies to move their operations to states with lower standards.

Albert 14 [(Caley Albert, J.D. Loyola Marymount University) “Liability in International Law and the Ramifications on Commercial Space Launches and Space Tourism,” Loyola of Los Angeles International and Comparative Law Review, 11/1/14, https://digitalcommons.lmu.edu/cgi/viewcontent.cgi?article=1708&context=ilr] TDI

A parallel can be drawn here between the commercial space industry and the maritime law concept of the Flag of Convenience. The term has evolved over time, but in this day and age, it is commonly used to mean the owner of a vessel does not want to create an obligation with a country with stricter standards for registry; hence, the owner will register strictly for economic reasons with a country that has a more convenient registry.133 By flying a Flag of Convenience, ship owners are able to avoid taxation on earnings of ships registered under these flags, and in some cases, they can also receive relief from stricter crew standards and corresponding operating costs.134 A Flag of Convenience is flown by a vessel that is registered in one state, which the vessel has little if any connection to, when in reality the vessel is owned and operated from another state.135 This way the vessel avoids any unfavorable economic requirements from its true home state.136 In this sense, “flag shopping” is similar to “launch forum shopping,” similar in that Flags of Convenience are utilized for economic reasons, such as to avoid high taxes and compliance with certain restrictive international conventions, commercial space companies will forum shop when choosing which country to launch from. As of today, there has yet to be a catastrophic commercial launch incident, so for now commercial space companies do not have an incentive to forum shop, but if there is, the indemnification policies described above may lead companies to seek out countries that provide more coverage so they pay less in the event something goes wrong. This comparison to Flags of Convenience brings up two separate yet equally important issues. First, launch companies may try to follow the Flags of Convenience model and soon catch on to the wisdom of their maritime predecessors by “registering” in countries with more favorable conditions. Of course, in this case the concern is not with registration so much as launching. If launch companies follow the Flags of Convenience model, they will seek out the most convenient state for launch, most likely the state that provides the most liability coverage and has the least safety precautions. Launching from states with low safety standards increases the potential for catastrophic launch events. This, in turn, will place states that are potentially incapable of paying for damages from launch disasters in a position they would not normally assume if these commercial companies had not been drawn to their shores with the promise of more favorable regulations. Second, launch customers may also seek out companies located in states with lower cost liability regimes (lower insurance policy limits) since those companies will presumably charge less to launch their payloads. In this scenario, instead of the launch companies seeking out states with lower liability caps and softer regulations, the launch customers themselves will seek companies located in states with lowcost liability regimes. Here, the effect will be the same as above. Under the Liability Convention, the launching state will be liable for any damage caused by a vehicle launched from within its borders; hence, if customers start engaging in “launch forum shopping,” states will be incentivized to put in place low-cost liability regimes, which in turn will increase the states’ potential payout in the event of a catastrophic launch incident. Looking at the indemnification program the United States has in place in comparison to other countries, it is possible to see how either launch companies or launch customers could engage in “launch forum shopping” when a catastrophic launch incident ever occur. It is also important to keep in mind that various factors go into where a company or customer decides to launch from. A state’s indemnification program is just one factor in this decision. With this in mind, it is clear that if a launch incident did occur in the United States, the commercial launch company would be liable for much more than it would in another country. For instance, why would a commercial space company launch in the United States, where it would be liable up to $500 million and the additional costs that the government would not cover? The argument can be made that a catastrophic space incident has yet to occur, and even if it did, it is unlikely to cost above the $2.7 billion covered by the United States government. **Other states like Russia or France, which has the two-tier liability system, would simply cover all claims above the initial insurance**, which is much lower than the $500 million mark required by the United States. In that case, the commercial company would never have to pay more than the initial liability insurance. If there ever is a catastrophic commercial space incident in the future, it is easy to see why commercial companies or launch customers might be drawn to “launch forum shop” outside the United States.

#### Maintaining US space dominance requires a homegrown commercial space industry – private companies offshoring gives China the advantage they need.

**Cahan and Sadat 21** [(Bruce Cahan, J.D) (Dr. Mir Sadat, ) "US Space Policies for the New Space Age: Competing on the Final Economic Frontier," based on Proceedings from State of the Space Industrial Base 2020 Sponsored by United States Space Force, Defense Innovation Unit, United States Air Force Research Laboratory, 1/6/21, https://www.politico.com/f/?id=00000177-9349-d713-a777-d7cfce4b0000] TDI

Today, China’s commercial space sector is in its infancy but is set to grow with continued national and provincial support, which have been rapidly increasing over the past three years.64 Since 2004, the United States and China accounted for 74% of the $135.2 billion venture capital (VC) invested in commercial space. 65 The early 2020s are pivotal, as it would be far cheaper for China and Chinese commercial space firms to acquire space technologies from the United States or allied nation companies seeking revenues or facing cashflow constraints, than to build the companies and their teams and technologies from scratch in China. The tight coupling of Chinese military goals and an economy organized to achieve those goals magnifies the economic threats and market disruptions that the United States must immediately address, in order for DoD and national security operations to rely on US commercial space capabilities. 3. ISSUES AND CHALLENGES Peaceful Uses of Space and Space Exploration Space has been primarily a shared, not a warfighting, domain.67 With each passing second of Planck time,68 space enables a modern way of life, provides instantaneous global imagery, assures telecommunications, and captures humanity’s imagination for civil space exploration. As a result, space is a burgeoning marketplace and territory for commercial ventures and investors. Strengthening the US commercial space industrial base is vital to and beyond US national security. Civil space activities are a source of US “soft power” in global commerce, cooperation, and investment. 69 The civil space sector, led by NASA, is fundamental to America’s national security. 70 NASA is on an ambitious critical path to return to the Moon by 2024,71 along with developing the capabilities and infrastructure for a sustained lunar presence. NASA’s lunar plans provide a lunar staging area for missions to Mars and beyond. They offer a strategic and economic presence for the United States on the Moon. Congress, the White House, DoD, and NASA must recognize that economic and strategic dominance in service of national security requires catalyzing and accelerating growth of a vibrant, private US industrial and cultural expansion into the Solar System. Human visitation and eventual settlement beyond the Earth require sustaining visionary leaders, aided by, and aiding, US national security. A recurring theme in US policy is “maintaining and advancing United States dominance and strategic leadership in space” because US global competitors and adversaries are competent and capable of outpacing American space capabilities. 72 The stakes are high: At this historic moment, there is a real race for dominance over cislunar access and resources. Regulations Should Foster US Commercial Space as a National Asset Leveraging the reimagination and disruption of terrestrial industries, the US commercial space industry is pushing the frontiers of the United States and global space economics and capabilities. A pre-COVID19 assessment by the US Chamber of Commerce projected that the US space market will increase from approximately $385 billion in 2020, to at least $1.5 trillion by 2040. 73 This projection represents a seven percent (7%) annual compound average growth rate (CAGR), driven largely by expanded business opportunities in Low Earth Orbit (LEO). Total addressable market (TAM) for US commercial space companies could be far larger were they to have federal and financial support for initiating cislunar space operations and opportunities. Recent advancements in commercial space technologies and business models have driven down costs and unlocked new areas of economic growth and space capabilities that outpace and de-risk acquiring capabilities through traditional US government economic development, research and development (R&D), procurement and regulatory policies and processes. US regulations must ensure that US companies lead in commercial space. In specific, technological advances that lower access costs and expand space mission capabilities, content, continuity, and redundancies must be fully supported by or incorporated into US government programs, budgets, requirements, and acquisition processes. Until commercial space offerings are fully incorporated, and federal acquisition policies and personnel commit to innovation, US government fiscal buying power, intelligence and program support will lag and remain inadequate in comparison to US private sector companies and the nation’s global competitors and adversaries in space. Addressing COVID-19’s Impact on US Commercial Space The COVID-19 pandemic damaged and still challenges the US space industrial base. US domestic investors’ funding of space R&D remains inconsistent across the lifecycle of New Space companies and the spectrum of technologies necessary to grow the space economy. To date, public R&D, government procurements and visionary space entrepreneurs have played a major role in establishing and funding the New Space industrial base. In the last five years, $11 billion of private capital has been invested.74 Traditional private investors may become reluctant to fund space technologies due to perceptions of higher risk over longer time horizons before receiving profitable returns on their capital. Institutional and long-horizon investors who manage patient capital have an appetite for illiquid, but higher yielding, terrestrial alternative asset investments such as commodities, private equity limited partnerships and real estate.75 The COVID-19 pandemic has created economic uncertainties making the New Space’s funding model unreliable. COVID-19 significantly impacted venture capital (VC)-backed companies: the pace of VC space investments fell 85% between April - June, as compared to January – March, in 2020. 76 Pre-COVID-19, the New Space industrial base confronted multiple challenges in raising later stages of venture capital such as (1) the lag between having an early-stage startup with an idea and commercializing a viable revenue-generating product, (2) the lack of market liquidity for founder and private equity space investments to attract and retain talented teams, and (3) the lack of a market to re-sell contracts for space goods and services when customers buy more capacity than needed. Even prior to the COVID-19 pandemic, federal financing of US R&D was at a historically minor level, as compared to businesses and universities.77 US government support for basic research has steadily declined as a percent of GDP. The federal government will experience near- to medium-term budget constraints.78 The vibrant venture community in the United States has taken up a portion of this slack by increasing R&D investment in later-stage and applied research. However, founding teams and VC financing rely on government to fund earlier R&D for basic science and engineering. Therefore, government must resume the sustainable and impactful past levels of support for basic research, an essential role in the space economy’s public-private partnership that ensures US leadership in space. Space as Existential Terrain for National Security In this Digital Era, space integrates and drives all elements of US national security. The Cold War may be over, but since the early 2010s, a renewed era of great power competition has emerged across terrestrial land, air, sea, and cyber domains. This competition extends into space, where a great game ensues.79 Space is no longer an uncontested or sanctuary domain. Competent and capable global competitors and peer adversaries are challenging US military, commercial, and civil space interests. The United States, along with its allies and partners, has had to accept and anticipate that space may be a warfighting domain, as suggested primarily by Russian and Chinese counter-space capabilities, military operations, and declarative statements. On December 20, 2019, the bipartisan National Defense Authorization Act (NDAA) for Fiscal Year 202080 authorized the creation of the US Space Force, under the Department of the Air Force, to secure US national interests in an increasingly contested domain.81 Back in October 1775, the Continental Congress established the US Navy to ensure that commercial and government fleets could freely navigate the Atlantic coastline - today, that includes the South China Sea. Likewise, the USSF’s mission is to ensure unfettered access to and the freedom to operate in space. The 2017 National Security Strategy considers space to be a “priority domain.”82 Freedom of navigation is a sovereign right that nations have fought to achieve and defend. 83 The USSF’s main role is to organize, train and equip, as well as to protecting US space interests and supporting terrestrial and joint warfighters (e.g., US Space Command). Thus, USSF must secure US national interests in space, whether military, commercial, scientific, civil, or enhancing US competitiveness for cislunar leadership.

#### Space dominance solves nuclear war. Heg de-escalates all conflict scenarios.

**Yoo 18** – Emanuel S. Heller Professor of Law at the University of California, Berkeley, and a visiting scholar at AEI since 2003. He served as a deputy assistant attorney general in the Office of the Legal Counsel of the U.S. Department of Justice from 2001 to 2003, where he worked on constitutional and national security matters, as General Counsel of the U.S. Senate Committee on the Judiciary from 1995-96, and as a law clerk to Justice Clarence Thomas of the U.S. Supreme Court (John, Winning the Space Race, October 15th, <http://www.aei.org/publication/winning-the-space-race/>) \*edited for offensive language

Control of space already **underlies the United States’ predominance in nuclear and conventional warfare.** Intercontinental and submarine launched ballistic missiles, the **heart of the US nuclear deterrent**, pass through space to reach their targets. Reconnaissance satellites monitor rival nations for missile launches, strategic deployments, and major troop movements. Communications satellites provide the high-speed data transfer that stitches the US Armed Forces together, from generals issuing commands to pilots controlling drones. With economic rivals such as China and India, and rogue states like Iran and North Korea developing space programs that pursue similar missions, the importance of space technology to US interests and international peace will only increase. Space not only enhances military operations, but also exposes new vulnerabilities. Anti-satellite missiles can make an opponent’s space-based communication networks easier to disable than purely ground-based systems. Losing reconnaissance satellites could ~~blind~~ gut the US’s strategic monitoring and disabling the GPS system would degrade its operational and tactical abilities. Space invites asymmetric warfare because anti-satellite attacks could even the technological odds against western powers that have become dependent on information-enhanced operations. As the nation most dependent on space-based networks, **the United States may have the most to lose.** Strategists divide competition in this emerging arena into four categories. First is space support, which refers to the launching and management of satellites in orbit. The second is force enhancement, which seeks to improve the effectiveness of terrestrial military operations. The importance of these basic missions is well-established. Indeed, the very first satellites performed a critical surveillance role in the strategic competition between the United States and the Soviet Union. Spy satellites replaced dangerous aerial reconnaissance flights in providing intelligence on rival nuclear missile arsenals. Later space-based systems provided the superpowers with early warnings of ballistic missile launches. These programs **bolstered stability and aided progress in nuclear arms reduction talks**. Satellites created “national technical means” of verification: the capability to detect compliance with arms control treaties without the need to intrude on territorial sovereignty. They **reduced the chances of human miscalculation** by increasing the information available to decision makers about the intentions of other nations. The US has made the most progress in the second mission, force enhancement, by using space to boost conventional military abilities. GPS enables the exact deployment of units, the synchronization of combat maneuvers, clearer identification of friend and foe, and precision targeting. In its recent wars, the US has used satellite information to find the enemy, even to the level of individual leaders, deploy on-station air or ground forces, and fire precision-guided munitions to destroy targets with decreased risk of collateral damage. American military leaders have argued that continued integration of space and conventional strike capabilities will allow the US to handle the twenty-first century threats—**terrorism, rogue nations, asymmetric warfare, and** regional challengers—more effectively with less resources.

#### Our claims accurately reflect Chinese attempts at great power competition in space.

Broad 21 [(William J, is a science journalist and senior writer.) "How Space Became the Next ‘Great Power’ Contest Between the U.S. and China," 1-24-2021 updated 5-6-2018, https://www.nytimes.com/2021/01/24/us/politics/trump-biden-pentagon-space-missiles-satellite.html] TDI

For years, the Chinese studied — with growing anxiety — the American military, especially its invasions of Afghanistan in 2001 and Iraq in 2003. The battlefield successes were seen as rooted in space dominance. Planners noted that thousands of satellite-guided bombs and cruise missiles had rained down with devastating precision on Taliban forces and Iraqi defenses. While the Pentagon’s edge in orbital assets was clearly a threat to China, planners argued that it might also represent a liability. “They saw how the U.S. projected power,” said Todd Harrison, a space analyst at the Center for Strategic and International Studies, a Washington think tank. “And they saw that it was largely undefended.” China began its antisatellite tests in 2005. It fired two missiles in two years and then made headlines in 2007 by shattering a derelict weather satellite. There was no explosion. The inert warhead simply smashed into the satellite at blinding speed. The successful test reverberated globally because it was the first such act of destruction since the Cold War. The whirling shards, more than 150,000 in all, threatened satellites as well as the International Space Station. Ground controllers raced to move dozens of spacecraft and astronauts out of harm’s way. The Bush administration initially did little. Then, in a show of force meant to send Beijing a message, in 2008, it fired a sophisticated missile to shoot down one of its own satellites. Beijing conducted about a dozen more tests, including ones in which warheads shot much higher, in theory putting most classes of American spacecraft at risk. China also sought to diversify its antisatellite force. A warhead could take hours to reach a high orbit, potentially giving American forces time for evasive or retaliatory action. Moreover, the speeding debris from a successful attack might endanger Beijing’s own spacecraft. In tests, China began firing weak laser beams at satellites and studying other ways to strike at the speed of light. However, all the techniques were judged as requiring years and perhaps decades of development. Then came the new idea. Every aspect of American space power was controlled from the ground by powerful computers. If penetrated, the brains of Washington’s space fleets might be degraded or destroyed. Such attacks, compared with every other antisatellite move, were also remarkably inexpensive. In 2005, China began to incorporate cyberattacks into its military exercises, primarily in first strikes against enemy networks. Increasingly, its military doctrine called for ~~paralyzing~~ early attacks. In 2008, hackers seized control of a civilian imaging satellite named Terra that orbited low, like the military’s reconnaissance craft. They did so twice — first in June and again in October — roaming control circuits with seeming impunity. Remarkably, in both cases, the hackers achieved all the necessary steps to command the spacecraft but refrained from doing so, apparently to reduce their fingerprints.

### 2

#### The existence of conditional goodness requires the unconditional human worth—that means we must treat others as ends in themselves.

Korsgaard 83 (Christine M., [American philosopher and Arthur Kingsley Porter Professor of Philosophy at Harvard University whose main scholarly interests are in moral philosophy and its history “Two Distinctions in Goodness,” The Philosophical Review Vol. 92, No. 2 (Apr. 1983), pp. 169-195, JSTOR) TDI

The argument shows how Kant's idea of justification works. It can be read as a kind of regress upon the conditions, starting from an important assumption. The assumption is that when a rational being makes a choice or undertakes an action, [they] supposes the object to be good, and its pursuit to be justified. At least, if there is a categorical imperative there must be objectively good ends, for then there are necessary actions and so necessary ends (G 45-46/427-428 and Doctrine of Virtue 43-44/384-385). In order for there to be any objectively good ends, however, there must be something that is unconditionally good and so can serve as a sufficient condition of their goodness. Kant considers what this might be**:** it cannot be an object of inclination, for those have only a conditional worth, "for if the inclinations and the needs founded on them did not exist, their object would be without worth" (G 46/428). It cannot be the inclinations themselves because a rational being would rather be free from them. Nor can it be external things, which serve only as means. So, Kant asserts, the unconditionally valuable thing must be "humanity" or "rational nature," which he defines as "the power set to an end" (G 56/437 and DV 51/392). Kant explains that regarding your existence as a rational being as an end in itself is a "subjective principle of human action." By this I understand him to mean that we must regard ourselves as capable of conferring value upon the objects of our choice, the ends that we set, because we must regard our ends as good. But since "every other rational being thinks of his existence by the same rational ground which holds also for myself' (G 47/429), we must regard others as capable of conferring value by reason of their rational choices and so also as ends in themselves. Treating another as an end in itself thus involves making that person's ends as far as possible your own (G 49/430). The ends that are chosen by any rational being, possessed of the humanity or rational nature that is fully realized in a good will, take on the status of objective goods. They are not intrinsically valuable, but they are objectively valuable in the sense that every rational being has a reason to promote or realize t hem. For this reason it is our duty to promote the happiness of others-the ends that they choose-and, in general, to make the highest good our end.

#### Next, any moral rule faces the problem of regress – I can keep asking “why should I follow this.” Regress collapses to skep since no one can generate obligations absent grounds for accepting them. Only reason solves since asking “why reason?” asks for a reason for reasons, which concedes its authority.

#### Thus, moral law must be universal—our judgements can’t only apply to ourselves any more than 2+2=4 can be true only for me.

#### Thus, the standard is consistency with the categorical imperative.

#### Now Negate:

#### 1] Libertarianism mandates a market-oriented approach to space—that negates

Broker 20 [(Tyler, work has been published in the Gonzaga Law Review, the Albany Law Review and the University of Memphis Law Review.) “Space Law Can Only Be Libertarian Minded,” Above the Law, 1-14-20, <https://abovethelaw.com/2020/01/space-law-can-only-be-libertarian-minded/>] TDI

The impact on human daily life from a transition to the virtually unlimited resource reality of space cannot be overstated. However, when it comes to the law, a minimalist, dare I say libertarian, approach appears as the only applicable system. In the words of NASA, “2020 promises to be a big year for space exploration.” Yet, as Rand Simberg points out in Reason magazine, it is actually private American investment that is currently moving space exploration to “a pace unseen since the 1960s.” According to Simberg, due to this increase in private investment “We are now on the verge of getting affordable private access to orbit for large masses of payload and people.” The impact of that type of affordable travel into space might sound sensational to some, but in reality the benefits that space can offer are far greater than any benefit currently attributed to any major policy proposal being discussed at the national level. The sheer amount of resources available within our current reach/capabilities simply speaks for itself. However, although those new realities will, as Simberg says, “bring to the fore a lot of ideological issues that up to now were just theoretical,” I believe it will also eliminate many economic and legal distinctions we currently utilize today. For example, the sheer number of resources we can already obtain in space means that in the rapidly near future, the distinction between a nonpublic good or a public good will be rendered meaningless. In other words, because the resources available within our solar system exist in such quantities, all goods will become nonrivalrous in their consumption and nonexcludable in their distribution. This would mean government engagement in the public provision of a nonpublic good, even at the trivial level, or what Kevin Williamson defines as socialism, is rendered meaningless or impossible. In fact, in space, I fail to see how any government could even try to legally compel collectivism in the way Simberg fears. Similar to many economic distinctions, however, it appears that many laws, both the good and the bad, will also be rendered meaningless as soon as we begin to utilize the resources within our solar system. For example, if every human being is given access to the resources that allows them to replicate anything anyone else has, or replace anything “taken” from them instantly, what would be the point of theft laws? If you had virtually infinite space in which you can build what we would now call luxurious livable quarters, all without exploiting human labor or fragile Earth ecosystems when you do it, what sense would most property, employment, or commercial law make? Again, this is not a pipe dream, no matter how much our population grows for the next several millennia, the amount of resources within our solar system can sustain such an existence for every human being. Rather than panicking about the future, we should try embracing it, or at least meaningfully preparing for it. Currently, the Outer Space Treaty, or as some call it “the Magna Carta of Space,” is silent on the issue of whether private individuals or corporate entities can own territory in space. Regardless of whether governments allow it, however, private citizens are currently obtaining the ability to travel there, and if human history is any indicator, private homesteading will follow, flag or no flag. We Americans know this is how a Wild West starts, where most regulation becomes the impractical pipe dream. But again, this would be a Wild West where the exploitation of human labor and fragile Earth ecosystem makes no economic sense, where every single human can be granted access to resources that even the wealthiest among us now would envy, and where innovation and imagination become the only things we would recognize as currency. Only a libertarian-type system, that guarantees basic individual rights to life, liberty, and the pursuit of happiness could be valued and therefore human fidelity to a set of laws made possible, in such an existence.

#### 2] Space appropriation and exploration originates from private companies such as Space X and Blue Origin. Preventing such is a restriction on the ability of companies to set and pursue their ends and these companies gain contracts with the government for projects which turns promise breaking offense.

## Case

### UV

#### No 1ar theory – [a] 7-6, 2-1 skew proves its always skewed to the aff, [b] resolvability double bind – either the judge has to intervene to decide whether the 2ar’s answers to the 2nr’s Counter interp are sufficient or they auto accept every answer, and you auto win. Intervention ow since it takes the round out of the debaters’ hands.

#### Neg gets an RVI on 1AR theory if the 1NC didn’t read a shell: [a] Otherwise the 1AR will always uplayer to give themselves an out that I can’t access offense on—the RVI is key to deter frivolous theory [b] Otherwise they can spread out the 2NR and collapse to whatever I undercover—there’s no 3NR so the 2AR can always shift to avoid my arguments.

### Framework

#### 1---Kant hijacks: The way to maximize wellbeing is by following the categorical imperative since it avoids pain through things like murder and exploitation.

### 1NC – Miscalc

#### 1] Space debris creates existential deterrence and a taboo.

**Bowen 18** [(Bleddyn, lecturer in International Relations at the University of Leicester) “The Art of Space Deterrence,” European Leadership Network, February 20, 2018, https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/] TDI

Fourth, the ubiquity of space infrastructure and the fragility of the space environment may create a degree of existential deterrence. As space is so useful to modern economies and military forces, a large-scale disruption of space infrastructure may be so intuitively escalatory to decision-makers that there may be a natural caution against a wholesale assault on a state’s entire space capabilities because the consequences of doing so approach the mentalities of total war, or nuclear responses if a society begins tearing itself apart because of the collapse of optimised energy grids and just-in-time supply chains. In addition, the problem of space debris and the political-legal hurdles to conducting debris clean-up operations mean that even a handful of explosive events in space can render a region of Earth orbit unusable for everyone. This could caution a country like China from excessive kinetic intercept missions because its own military and economy is increasingly reliant on outer space, but perhaps not a country like North Korea which does not rely on space. The usefulness, sensitivity, and fragility of space may have some existential deterrent effect. China’s catastrophic anti-satellite weapons test in 2007 is a valuable lesson for all on the potentially devastating effect of kinetic warfare in orbit.

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

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

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.

#### 3] No Impact!

#### A] Their evidence just says may prove conflict between nations and doesn’t mention nuclear war.

#### B] 2 parts of Orwig nonunique the aff – a] currently theres “five to six hundred thousnads space debris” which means squo debris thumps b] “already been repeated ‘sudden failures” of spacecraft’ means theres no impact to the aff since even if satellites go dark they know its debris

#### 3] 1AC Intagliata is about squo debris – you don’t solve.

Aside from all the satellites, and the space station orbiting the Earth, there's a lot of trash circling the planet, too. Twenty-one thousand baseball-sized chunks of debris, according to NASA. But that number's dwarfed by the number of small particles. There's hundreds of millions of those. "And those smaller particles tend to be going fast. Think of picking up a grain of sand at the beach, and that would be on the large side. But they're going 60 kilometers per second."

#### 4] Alliances check miscalc – too costly.

**MacDonald 13** [(Bruce, teaches at the United States Institute of Peace on strategic posture and space/cyber security issues, leads a study on China and Crisis Stability in Space, and is adjunct professor at the Johns Hopkins School of Advanced International Studies) “Deterrence and Crisis Stability in Space and Cyberspace,” in Anti-satellite Weapons, Deterrence and Sino-American Space Relations, September 2013, https://apps.dtic.mil/dtic/tr/fulltext/u2/a587431.pdf] TDI

The US alliance structure can promote deterrence and crisis stability in space, as with nuclear deterrence. China has no such alliance system. If China were to engage in large-scale offensive counter-space operations, it would face not only the United States, but also NATO, Japan, South Korea and other highly aggrieved parties. Given Beijing’s major export dependence on these markets, and its dependence upon them for key raw material and high technology imports, China would be as devastated economically if it initiated strategic attacks in space. In contrast to America’s nuclear umbrella and extended deterrence, US allies make a tangible and concrete contribution to extended space deterrence through their multilateral participation in and dependence upon space assets. Attacks on these space assets would directly damage allied interests as well as those of the United States, further strengthening deterrent effects.

### 1NC – Cooperation

#### 1] Space exploration fails without private sector leadership.

WAMU 20 [(interviewing Ariel Ekblaw, founder and lead of MIT Media Lab’s Space Exploration Initiative and Charles Bolden, NASA administrator from 2009-2017) “How Private Companies Are Changing The Future Of Space Exploration,” February 6, 2020, https://wamu.org/story/20/02/06/how-private-companies-are-changing-the-future-of-space-exploration/] TDI

How Private Companies Are Changing The Future Of Space Exploration LISTEN SpaceX founder Elon Musk addresses the media alongside NASA Administrator Jim Bridenstine, and astronauts Doug Hurley and Bob Behnken, during a press conference announcing new developments of the Crew Dragon reusable spacecraft, at SpaceX headquarters in Hawthorne, California on October 10, 2019. (Philip Pacheco / AFP) Private companies like SpaceX are testing vehicles for manned space missions. We’ll peer out into the near future and next steps in human space exploration. Guests Ariel Ekblaw, founder and lead of MIT Media Lab’s Space Exploration Initiative. (@ariel\_ekblaw) Charles Bolden, NASA administrator from 2009-2017, and a former astronaut and Marine Corps general. (@cboldenjr) Interview Highlights American astronaut Christina Koch broke the record for the longest-ever space flight by a woman today. Where is human space exploration going next? Ariel Ekblaw: “It’s a huge milestone. Part of her story around the spacesuit, and the sizing of the spacesuits, and the all-female spacewalk is something that we pay a lot of attention to at our group at M.I.T. And then being able to be in space for that length of time provides an invaluable sense of knowledge of what is the human lived experience of space. “How might we better design for her comfort to delight her in space? To now, thanks to standing on the shoulders of groups like NASA and Charlie’s work, think about not just a survivalist mode for space exploration, but what are the artifacts, and the tools, and the experiences that we could design for Christine in the future? Given her experience of this 300-plus-day journey and stay to really delight her for her experience in space exploration. And in the future, scale that to space tourists and others besides astronauts.” On how close we are to regular space tourism Ariel Ekblaw: “I would say we’re both close — we’re dangerously close — and yet so far away. So companies like Blue Origin and Virgin Galactic are racing to be able to send some of the first space tourists into low Earth orbit on some of their crafts, in either this year, or upcoming years. With Axiom and the announcement from NASA about the first commercial space station to be attached to the International Space Station. “We’re beginning to build up that infrastructure that could support real space tourism. There are still, as I’m sure Charlie can also speak to, large unanswered questions about how do you prepare someone if not off the street — A space enthusiast — for the experience of space when they’re not necessarily going to have the same in-depth, extensive training as a NASA astronaut? How do we keep them safe? How do we handle mental health? How do we prepare them for both the excitement and the responsibility that they might have as a member of a crew in a resource constrained environment?” On whether people who aren’t trained as astronauts should be able to go into space Charles Bolden: “Yes, without a doubt. … They’ve got to have some training. But I would say it depends on what the flight is going to be. I haven’t had a chance to talk to Beth Moses from Virgin Galactic. But Beth would be — she’s not a normal person off the street, because she’s the astronaut training officer at Blue Origin. But Beth had an opportunity to fly, and she didn’t go through years of training. You know, I think there’s some fundamental things that you teach someone about mobility. And, ‘don’t touch that.’ And you let them go.” On whether it’s possible to go to Mars without commercial interest involved Ariel Ekblaw: “I think it’s critical to have both. As Charlie and Dava Newman — another colleague of mine — have shown: the path from moon to Mars is going to be a public-private partnership path. And we need the capability that private brings and the inspiration that NASA and that the governments can still bring to the task.” On what it’s like to go to space Charles Bolden: “It’s much more spectacular than the pictures portray. We have great cameras nowadays. They’re better and better than they ever were before, but they just cannot capture what the human eye sees. God’s camera is pretty awesome. The ability to play around with Newton’s law, the fact that, you know, because gravity is overcome by the speed at which you’re going around the planet allows us to seem like we’re floating. And that’s a lot of fun to get to play with. You know, a body at rest stays at rest, a body in motion stays in motion. And for every action, there’s an equal and opposite reaction. It makes all that stuff that you learned in middle school, if you learned it, or if you avoided it, it brings it to life for you. So that’s incredible.” From The Reading List Wall Street Journal: “Space Is Poised for Explosive Growth. Let’s Get It Right.” — “In the 19th century, urban planners wrangled the chaotic metropolises of Paris and New York into “planned cities,” turning warrens of streets into orderly grids, building sewage systems and transit lines, and allowing for new types of architecture, such as apartment buildings. Today, we face a similar inflection point in developing the nearest reaches of space. “The next decade is set to bring explosive commercial growth and more private industry players to low-earth orbit, the area spanning 100 to 1,240 miles above the planet’s surface. SpaceX has proposed a satellite-based internet, and Planet is growing its fleet of Earth-imaging satellites. NASA plans a transition towards commercial management of the international space station. Several startups are developing low-earth orbit advertisements—logos or other designs, visible in the night sky, made from tiny, reflective satellites. Entrepreneurs are making plans for space hotels. “Before we let rampant development go unchecked, we should consider how these efforts might conflict with or complement each other. We still have the chance to intentionally design humanity’s first ‘planned orbit.’” MIT Media Lab: “Democratizing Access to Space” — “The Space Exploration Initiative’s founding mission is to rigorously, vigorously build out the technologies of our sci-fi space future while keeping our innovations and team as open and accessible as possible. When we say we’re ‘democratizing access to space exploration,’ what do we mean? In the context of our blue sky goal — to realize an inclusive, impactful — we approach democratization in four core ways. We are: “1. Democratizing access by inviting and uniting new disciplines in our creative practice] “2. Democratizing access by designing space tools, products, and experiences for all of us, not just the pinnacle of human talent embodied by astronauts. “3. Democratizing access by developing hands-on, widely accessible opportunities to shape the technologies of our space future. “4. Democratizing access through the celebration of new narratives through which we can tell the story of Space Exploration, writ large.” The Verge: “This was the decade the commercial spaceflight industry leapt forward” — “Two years into the decade, on May 25th, 2012, a small teardrop-shaped capsule arrived at the International Space Station, packed with cargo and supplies for the crew living on board. Its resupply mission at the ISS wasn’t remarkable, but the vehicle itself was unique: it was a Dragon cargo capsule, owned and operated by a private company called SpaceX. “Before 2012, only vehicles operated by governments had ever visited the ISS. The Dragon was the first commercial vehicle to dock with the station. The milestone was a crowning achievement for the commercial industry, which has permanently altered the spaceflight sector over the last 10 years. “This decade, the space industry has seen a shift in the way it does business, with newer players looking to capitalize on different markets and more ambitious projects. The result has been an explosion of growth within the commercial sector. It’s allowing for easier access to space than ever before, with both positive and negative results. Such growth is providing the commercial space industry with lots of momentum coming into the 2020s, but it’s unclear if this pace is something that can be kept up.” Axios: “NASA’s murky commercial space future” — “NASA’s plans to create a robust economy in low-Earth orbit where private spaceflight companies can flourish could eventually leave the agency’s astronauts stranded on Earth with nowhere to go. “Why it matters: NASA hopes to play a lead role in developing a private spaceflight economy, including private sector astronauts. The agency sees this as a way to free it up to focus on farther afield goals like bringing humans back to the Moon and, eventually, to Mars.

#### 2] No Russia war—no motivation for Russian aggression.

Trenin 18 [Dmitri Trenin is director of the Carnegie Moscow Center. Fears of World War III are overblown. July 20, 2018. https://www.politico.eu/article/donald-trump-vladimir-putin-nato-crimea-fears-of-world-war-iii-are-overblown/]

Europeans fretted about the end of NATO. But seen from Moscow, the military alliance still appears to be very much alive. Trump's harsh words to his allies on spending haven't changed that. Russia is all too aware that the alliance is focused on its eastern flank, and not only rhetorically. Since it rediscovered Russia as a threat in 2014, there have been new deployments, a higher degree of mobility, and more military exercises along the Russian border, from the Barents to the Black Seas. Hardly a boon for Russia. It was clear at last week's NATO summit that allies agree on the need to upgrade the bloc’s military efforts. Germany, Italy, France, the U.S. — they all agree members’ defense spending should go up. Whether by 2 percent of GDP as agreed in Wales, or by 4 percent as now demanded by Trump, is, of course, important. However, with Russia’s GDP often likened to that of Spain, or the state of New York, either figure is considered significant in Moscow, given that the money will be spent with Russia in mind. NATO allies also worry about Trump’s comment this week that it is problematic for the U.S. to come to the defense of smaller NATO allies such as Montenegro. But let’s not forget that at the height of the Cold War it was never 100 percent certain what the U.S. would do in case of an attack on West Germany. Former Chancellor Helmut Schmidt would not have asked for U.S. medium-range missiles in Europe in the 1970s had he had full confidence in NATO's largest member. Nor is NATO enlargement off the table completely. Macedonia has just crossed a major hurdle in its push for membership. Predictions that Trump would recognize Crimea at the Helsinki meeting were also overblown. There was never any question of the U.S. accepting Crimea’s status as part of Russia, or Washington leaning on Kiev to fulfill its side of the Minsk II accords. In Helsinki, Trump and Putin simply acknowledged the issue, and moved on. The U.S. continues to support both Ukraine and Georgia in their conflicts with Russia and to promote their eventual membership in NATO, which most in the West privately regard as increasingly dangerous. NATO is still very much exerting pressure on Russia. It's considered more of an annoyance than an immediate threat in Moscow, but also keeps the country in permanent "war mode" vis-à-vis the U.S. Because Moscow is focused on Washington, this means Europeans usually get a pass. As for Russia’s own intentions, two things are clear. There is no interest in Moscow in attacking the Baltic states or Poland. These countries are as safe now as they were before 2014. Suggestions otherwise simply point to the deep wounds in both nations' psyche, which will not be healed for many decades. Should Ukraine's leaders decide to repeat Mikheil Saakashvili’s mistake in 2008 and launch a major offensive to retake Donbas — however unlikely — the Russian response could indeed be devastating and lead to Ukraine's loss of sovereignty, as Putin recently stated. But does this mean Russia will move on Ukraine unprovoked? Most certainly not. Putin's main concerns are largely domestic. He has an ambitious program that logically calls for more economic ties with the West. To move forward, he is looking to ease tensions with the EU and the U.S. What Putin wanted to get out of Helsinki was mainly to start a dialogue with Washington. Those hopes are now visibly going up in smoke. It is safe to bet that Russia will continue to face the same opposition from a coalition of U.S. and EU interests. The first détente in the hybrid war between Russia and the West was indeed nipped in the bud by Trump's behavior and the vehemence of his domestic critics. So be it. Moscow will not capitulate, and will indeed push back. But it's not likely to take the form of an aggressive, overt military attack. Fears of new wars are far from accurate.

#### 3] Alt cause—relations irreparable.

Nikolas K. GVOSDEV 17, contributing editor at the National Interest, senior fellow at the Foreign Policy Research Institute [“Damage Done: How Russia Hysteria Has Hurt U.S.-Russia Relations,” *The National Interest*, March 6 17, http://nationalinterest.org/feature/damage-done-how-russia-hysteria-has-hurt-us-russia-relations-19687]

But we should also recognize that the damage is done. The current political climate now guarantees that any sort of pragmatic approach to settling the disputes between the United States and Russia is off the table. There seems no way that U.S.-Russia relations can be easily extracted from the hole in which they currently reside. In turn, those in Russia who were cautiously advocating for exploring areas where Moscow and Washington might cooperate are seeing that position being discredited.

Over the past few years, a number of analysts have warned about the creeping strategic partnership between Moscow and Beijing and how closer Russia-China relations create real problems for the United States. The window of opportunity to nudge the Kremlin to adopt a much more equidistant posture between the two—despite all of the slings and arrows Moscow has cast our way—is closing. Getting the U.S.-Russia relationship back to some semblance of a normal bilateral encounter was already going to be difficult, but it now may prove to be nearly impossible.