# 1NC vs Marlborough AK

## 1

### 1nc – t

#### Interp – the Affirmative must only defend that appropriation of outer space is unjust.

#### Violation: They literally establish a global commons on top of that which is extra topical, or effects topical, which still links into all of our offense

#### Standards – Effects and Extra-T which are voters for predictable limits and ground – allowing the Aff to defend implementation through any number of agreements/mechanisms explodes predictable limits – it shifts the topic to not appropriation good/bad but how we should end it which skews pre-tournament prep.

#### TVA – just read a whole res aff with the same advantages and don’t adopt a whole commons

#### Competing interps – reasonability incentivzes judge intervention and you cant be “reasonably topical”

#### No RVIs – your burden to be topical

## 2

### 1nc – spec

#### Interpretation – the aff must specify what type of Private Actor Appropriation they affect.

#### Appropriation is extremely vague – no legal precedent means no normal means

Pershing 19, Abigail D. "Interpreting the Outer Space Treaty's Non-Appropriation Principle: Customary International Law from 1967 to Today." Yale J. Int'l L. 44 (2019): 149. (Robina Fellow at European Court of Human Rights. European Court of Human Rights Yale Law School)//Elmer

Though the Outer Space Treaty flatly prohibits national appropriation of space,150 it leaves unanswered many questions as to what actually counts as appropriation. As far back as 1969, scholars wondered about the implications of this article.151 While it is clear that a nation may not claim ownership of the moon, other questions are not so clear. Does the prohibition extend to collecting scientific samples?152 Does creating space debris count as appropriation by occupation? While the answers to these questions are most likely no, simply because of the difficulties that would be caused otherwise, there are some questions that are more difficult to answer, and more pressing. As commercial space flight becomes more and more prevalent,153 the question of whether private entities can appropriate property in space becomes very important. Whereas once it took a nation to get into space, it will soon take only a corporation, and scholars have pondered whether these entities will be able to claim property in space.154 Though this seems allowable, since the treaty only prohibits “national appropriation,”155 allowing such appropriation would lead to an absurd result. This is because the only value that lies in recognition of a claim is the ability to have that claim enforced.156 If a nation recognized and enforced such a claim, this enforcement would constitute state action.157 It would serve to exclude members of other nations and would thus serve as a form of national appropriation, even though the nation never attempted to directly appropriate the property.158 Furthermore, the Outer Space Treaty also requires that non-governmental entities must be authorized and monitored by the entities’ home countries to operate in space.159 Since a nation cannot authorize its citizens to act in contradiction to international law, a nation would not be allowed to license a private entity to appropriate property in space.160 While this nonappropriation principle is great for allowing free access to space, thereby encouraging research and development in the field, it makes it difficult to create or police a solution to the space debris problem. A viable solution will have to work without becoming an appropriation. There is, however, very little substantive law on what actually counts as appropriation in the context of space.161 So, the best way to see what is and is not allowed is to look both at the general international law regarding appropriations and to look at the past actions of space actors to see what has been allowed (or at least tolerated) and what has been prohibited or rejected.

#### Violation: they don’t

#### The net benefit is shiftiness – vague plan wording wrecks Neg Ground since it’s impossible to know which arguments link given different types of appropriation like mining, space col, satellites, and tourism – the 1AR dodges links by saying they don’t affect particular types of appropriation, or they don’t reduce private appropriation enough to trigger the link

#### c/a paradigm issues

## 3

### 1nc – cp

#### States should:

#### Remove the most volatile and largest Debris pieces from the most congested orbits

#### Mandate UN guidelines on space debris mitigation

#### Collaborate on techniques to track and display the location of objects in real time and AI to automate debris-avoidance maneuvers

#### Indefinitely stall deployment of low earth orbit ASAT’s.

#### Increase funding for and implement of carbon capture technology

#### 1-4th planks solve satellites, miscalc, Kessler, and debris collisions

Nature 8/11 [(Nature Editorial Board, peer-reviewed, comprises experimental scientists and data-standards experts from across different fields of science) “The world must cooperate to avoid a catastrophic space collision,” Nature, 8/11/2021] JL

But there are no traffic cops in space, nor international borders with clearly delineated areas of responsibility. To avoid further damage, it’s crucial that satellite operators have an accurate and up-to-date list of where objects are in space. At present, the main global catalogue of space objects is published at Space-Track.org by the US Space Command, a branch of the military. The catalogue is the most widely used public listing available, but it lacks some satellites that countries — including the United States, China and Russia — have not acknowledged publicly. In part because of this lack of transparency, other nations also track space objects, and some private companies maintain commercially available catalogues.

Rather than this patchwork of incomplete sources, what the world needs is a unified system of space traffic management. Through this, spacefaring nations and companies could agree to share more of their tracking data and cooperate to make space safer. This might require the creation of a new global regime, such as an international convention, through which rules and technical standards could be organized. One analogy is the International Telecommunication Union, the United Nations agency that coordinates global telecommunications issues such as who can transmit in which parts of the radio spectrum.

It won’t be easy to create such a system for space traffic. For it to succeed, questions of safety (such as avoiding smashing up a satellite) will need to be disentangled from questions of security (such as whether that satellite is spying on another nation) so that countries can be assured that participating in such an effort would not compromise national security. Countries could, for instance, share information about the location of a satellite without sharing details of its capabilities or purpose for being in space.

One near-term move that would help would be for the United States to complete a planned shift of responsibility for the Space-Track.org catalogue from the military to the civilian Department of Commerce. Because this catalogue has historically been the most widely used around the world, shifting it to a civilian agency could start to defuse geopolitical tensions and so improve global efforts to manage space debris. It might one day feed into a global space-traffic agreement between nations; even the nascent space superpower China would have a big incentive to participate, despite rivalries with the United States. The transition was called for in a 2018 US presidential directive that recognizes that companies are taking over from national governments as the dominant players in space, but it has yet to occur, in part because Congress has not allocated the necessary funds.

On 25 August, the UN Committee on the Peaceful Uses of Outer Space will meet to discuss a range of topics related to international cooperation in space. The UN is the right forum through which spacefaring nations can work together to establish norms for responsible space behaviour, and that should include how the world can track objects to make space safer. It should continue recent work it has been doing emphasizing space as a secure and sustainable environment, which at least brings countries such as the United States and China into the same conversation.

Basic research has a role, too: innovations such as techniques to track and display the locations of orbiting objects in real time, and artificial intelligence to help automate debris-avoidance manoeuvres, could bolster any global effort to monitor and regulate space.

If governments and companies around the world do not take urgent action to work together to make space safer, they will one day face a catastrophic collision that knocks out one or more satellites key to their safety, economic well-being or both. Space is a global commons and a global resource. A global organization responsible for — and capable of — managing the flow of space traffic is long overdue.

#### 5th plank solves the only terminal (warming) to cap if they win 5-7 don’t –

**Welch 19**, (Craig Welch covers the environment and natural resources, with a focus on climate change and oceans, *National Geographic*, “To curb climate change, we have to suck carbon from the sky. But how?” January 17, https://www.nationalgeographic.com/environment/2019/01/carbon-capture-trees-atmosphere-climate-change/)//AH

In the three years since 195 nations committed in Paris to cap global temperature increases at 2 degrees Celsius—while also agreeing to aim for 1.5 degrees—a few things have become bracingly clear. The world must quickly stop burning fossil fuels. And **that is no longer enough.** Again and again, including in a major report published fall, the Intergovernmental Panel on Climate Change and other science bodies have reached a stark conclusion: **Most paths to halting global temperature** increases at 2 degrees—and every path to reach 1.5 degrees—rely in some way on adopting methods of **sucking CO2 from the sky.** It is a significant about-face. For years many scientists dismissed or downplayed the most highly engineered CO2 removal strategies. Those techniques were often lumped in with more dangerous forms of "geoengineering," such as injecting sulfates or other aerosols into the stratosphere to reflect sunlight and cool the planet. Focusing money and energy on any such technological fix seemed both risky and fraught with "moral hazard"—a distraction from the urgent need to cut emissions by slashing use of coal, oil, and gas. But now many see "negative emissions," as CO2 removal strategies are also called, as **an essential bridge to a clean-energy future.** "CO2 removal has gone from a moral hazard to a **moral imperative,**" says Julio Friedmann, senior research scholar at the Center for Global Energy Policy at Columbia University. There are several reasons for the shift. For starters, attempting to set a hard target at 1.5 or 2 degrees gives the world an emissions cap. With carbon emissions from fossil fuels estimated to have risen 2.7 percent in 2018, we're clearly not moving fast enough to reduce emissions—or even in the right direction. "The longer we have postponed drastic reductions, the more daunting the challenge of achieving those reductions in the necessary time frame," says Erica Belmont, a University of Wyoming engineering researcher. Even if the developed world rapidly switched to clean fuels, poorer countries would likely take longer. Emissions from some industries, such as cement and steel production, will be hard to eliminate, and alternative fuels for air travel are expected to remain expensive for quite some time.

## 4

### 1nc – da

#### Strong US commercial space catalyzes tech innovation – progress at the margins and spinoff tech change global information networks

Joshua Hampson 2017, Security Studies Fellow at the Niskanen Center, 1-25-2017, “The Future of Space Commercialization”, Niskanen Center, https://republicans-science.house.gov/sites/republicans.science.house.gov/files/documents/TheFutureofSpaceCommercializationFinal.pdf

Innovation is generally hard to predict; some new technologies seem to come out of nowhere and others only take off when paired with a new application. It is difficult to predict the future, but it is reasonable to expect that a growing space economy would open opportunities for technological and organizational innovation. In terms of technology, the difficult environment of outer space helps incentivize progress along the margins. Because each object launched into orbit costs a significant amount of money—at the moment between $27,000 and $43,000 per pound, though that will likely drop in the future —each 19 reduction in payload size saves money or means more can be launched. At the same time, the ability to fit more capability into a smaller satellite opens outer space to actors that previously were priced out of the market. This is one of the reasons why small, affordable satellites are increasingly pursued by companies or organizations that cannot afford to launch larger traditional satellites. These small 20 satellites also provide non-traditional launchers, such as engineering students or prototypers, the opportunity to learn about satellite production and test new technologies before working on a full-sized satellite. That expansion of developers, experimenters, and testers cannot but help increase innovation opportunities. Technological developments from outer space have been applied to terrestrial life since the earliest days of space exploration. The National Aeronautics and Space Administration (NASA) maintains a website that lists technologies that have spun off from such research projects. Lightweight 21 nanotubes, useful in protecting astronauts during space exploration, are now being tested for applications in emergency response gear and electrical insulation. The need for certainty about the resiliency of materials used in space led to the development of an analytics tool useful across a range of industries. Temper foam, the material used in memory-foam pillows, was developed for NASA for seat covers. As more companies pursue their own space goals, more innovations will likely come from the commercial sector. Outer space is not just a catalyst for technological development. Satellite constellations and their unique line-of-sight vantage point can provide new perspectives to old industries. Deploying satellites into low-Earth orbit, as Facebook wants to do, can connect large, previously-unreached swathes of 22 humanity to the Internet. Remote sensing technology could change how whole industries operate, such as crop monitoring, herd management, crisis response, and land evaluation, among others. 23 While satellites cannot provide all essential information for some of these industries, they can fill in some useful gaps and work as part of a wider system of tools. Space infrastructure, in helping to change how people connect and perceive Earth, could help spark innovations on the ground as well. These innovations, changes to global networks, and new opportunities could lead to wider economic growth.

#### Tech innovation solves every existential threat – cumulative extinction events outweigh the aff

Dylan **Matthews 18**. Co-founder of Vox, citing Nick Beckstead @ Rutgers University. 10-26-2018. "How to help people millions of years from now." Vox. https://www.vox.com/future-perfect/2018/10/26/18023366/far-future-effective-altruism-existential-risk-doing-good

If you care about improving human lives, you should overwhelmingly care about those quadrillions of lives rather than the comparatively small number of people alive today. The 7.6 billion people now living, after all, amount to less than 0.003 percent of the population that will live in the future. It’s reasonable to suggest that those quadrillions of future people have, accordingly, hundreds of thousands of times more moral weight than those of us living here today do. That’s the basic argument behind Nick Beckstead’s 2013 Rutgers philosophy dissertation, “On the overwhelming importance of shaping the far future.” It’s a glorious mindfuck of a thesis, not least because Beckstead shows very convincingly that this is a conclusion any plausible moral view would reach. It’s not just something that weird utilitarians have to deal with. And Beckstead, to his considerable credit, walks the walk on this. He works at the Open Philanthropy Project on grants relating to the far future and runs a charitable fund for donors who want to prioritize the far future. And arguments from him and others have turned “long-termism” into a very vibrant, important strand of the effective altruism community. But what does prioritizing the far future even mean? The most literal thing it could mean is preventing human extinction, to ensure that the species persists as long as possible. For the long-term-focused effective altruists I know, that typically means identifying concrete threats to humanity’s continued existence — like unfriendly artificial intelligence, or a pandemic, or global warming/out of control geoengineering — and engaging in activities to prevent that specific eventuality. But in a set of slides he made in 2013, Beckstead makes a compelling case that while that’s certainly part of what caring about the far future entails, approaches that address specific threats to humanity (which he calls “targeted” approaches to the far future) have to complement “broad” approaches, where instead of trying to predict what’s going to kill us all, you just generally try to keep civilization running as best it can, so that it is, as a whole, well-equipped to deal with potential extinction events in the future, not just in 2030 or 2040 but in 3500 or 95000 or even 37 million. In other words, caring about the far future doesn’t mean just paying attention to low-probability risks of total annihilation; it also means acting on pressing needs now. For example: We’re going to be better prepared to prevent extinction from AI or a supervirus or global warming if society as a whole makes a lot of scientific progress. And a significant bottleneck there is that the vast majority of humanity doesn’t get high-enough-quality education to engage in scientific research, if they want to, which reduces the odds that we have enough trained scientists to come up with the breakthroughs we need as a civilization to survive and thrive. So maybe one of the best things we can do for the far future is to improve school systems — here and now — to harness the group economist Raj Chetty calls “lost Einsteins” (potential innovators who are thwarted by poverty and inequality in rich countries) and, more importantly, the hundreds of millions of kids in developing countries dealing with even worse education systems than those in depressed communities in the rich world. What if living ethically for the far future means living ethically now? Beckstead mentions some other broad, or very broad, ideas (these are all his descriptions): Help make computers faster so that people everywhere can work more efficiently Change intellectual property law so that technological innovation can happen more quickly Advocate for open borders so that people from poorly governed countries can move to better-governed countries and be more productive Meta-research: improve incentives and norms in academic work to better advance human knowledge Improve education Advocate for political party X to make future people have values more like political party X ”If you look at these areas (economic growth and technological progress, access to information, individual capability, social coordination, motives) a lot of everyday good works contribute,” Beckstead writes. “An implication of this is that a lot of everyday good works are good from a broad perspective, even though hardly anyone thinks explicitly in terms of far future standards.” Look at those examples again: It’s just a list of what normal altruistically motivated people, not effective altruism folks, generally do. Charities in the US love talking about the lost opportunities for innovation that poverty creates. Lots of smart people who want to make a difference become scientists, or try to work as teachers or on improving education policy, and lord knows there are plenty of people who become political party operatives out of a conviction that the moral consequences of the party’s platform are good. All of which is to say: Maybe effective altruists aren’t that special, or at least maybe we don’t have access to that many specific and weird conclusions about how best to help the world. If the far future is what matters, and generally trying to make the world work better is among the best ways to help the far future, then effective altruism just becomes plain ol’ do-goodery.\*

## 5

### 1nc – cp

#### CP: States other than China ought to adopt a binding international agreement that bans the appropriation of outer space by private entities by establishing outer space as a global commons subject to regulatory delimiting and global liability.

#### Xi’s grip on the Party is secure - right now, no one is equipped to oppose him openly or covertly & any political uncertainty that exists has been intentionally fostered for his own agenda. Any concern for “policy disasters” is post-2022

**Buckley 2022** [Buckley, Chris. “A Succession Drama, Chinese Style, Starring Xi Jinping.” *The New York Times*, The New York Times, 14 Feb. 2022, https://www.nytimes.com/2022/02/14/world/asia/china-xi-jinping.html.]

One rising Chinese provincial leader [lauded](http://paper.cntheory.com/html/2021-12/27/nw.D110000xxsb_20211227_1-A1.htm) Xi Jinping as the Communist Party’s “greatest guarantee.” The party chief of a big coastal city [urged officials](https://djyj.12371.cn/2021/12/31/ARTI1640928099900579.shtml) to revere Mr. Xi’s “noble bearing as a leader and personal charisma.” A [top general said](http://paper.people.com.cn/rmrb/html/2021-11/30/nw.D110000renmrb_20211130_1-06.htm) Mr. Xi had faced down “grave political risks” to achieve the “revolutionary reinvention” of China’s military. The orchestrated adulation that has carried Mr. Xi into 2022 adds to the growing certainty that he will secure another term in power at a Communist Party congress late in the year. **In an era of global upheaval and opportunity,** [**scores of senior officials**](https://www.xuexi.cn/xxqg.html?id=0c231ef0f8e2481e9c566b26352d7a2f) **have said, China needs a resolute, powerful central leader — that is, Mr. Xi — to ensure its ascent as a superpower.** But one great uncertainty looms over China, and it is of Mr. Xi’s own design: Nobody, except maybe a tight-lipped circle of senior officials, knows how long he wants to stay in power, or when and how he will appoint a political heir. Mr. Xi seems to like it that way. **“Xi’s political genius is the strategic use of uncertainty; he likes to keep everyone off balance,”** said [Christopher K. Johnson](https://chinastrategiesgroup.com/#:~:text=Our%20Team-,Christopher%20K.,opportunities%20in%20China%20and%20regionally.), the president of the China Strategies Group and a former Central Intelligence Agency analyst of Chinese politics. At the congress, **Mr. Xi is highly likely to keep his key post as Communist Party general secretary for five more years, bucking the previous assumption that Chinese leaders were settling into a pattern of decade-long reigns. Chinese** [**legislators abolished a term limit**](https://www.nytimes.com/2018/03/07/world/asia/china-xi-jinping-party-term-limit.html) **on the presidency in 2018, clearing the way for Mr. Xi, 68, to hold onto all his major posts indefinitely: president, party leader and military chairman.** **But for how many years?** And who would take over after him? The dilemmas of when and how to signal a plan to step away from formal office and confirm an heir could test Mr. Xi’s redoubtable political skills. **Keeping everyone guessing could help reinforce loyalty to him, and give him more time to judge potential successors.** Yet holding off from designating one could magnify anxiety, even rifts, in China’s elite. “To pick an heir would make Xi a lame duck to some extent,” [Guoguang Wu](https://www.uvic.ca/socialsciences/politicalscience/people/directory/wuguoguang.php), a professor at the University of Victoria in Canada who served as an adviser to [Zhao Ziyang](https://www.nytimes.com/2019/10/18/world/asia/zhao-ziyang-china-tiananmen-square-protests.html), the Chinese leader ousted in 1989, wrote by email. “But it would also reduce the pressure Xi has to confront in seeking his third term.” **Confidence, Mr. Xi has said, is key to protecting party power, and he wants no surprises to upset a triumphant buildup to the congress. Setting economic priorities for 2022, China’s leaders** [**repeated**](http://cpc.people.com.cn/n1/2021/1210/c64094-32305207.html) **“stability” seven times. Beijing is not wavering from its “zero Covid” strategy, while other countries have buckled. This year, too, China’s Winter Olympics, so far untroubled by protest, and** [**planned launch of a space station**](http://www.xinhuanet.com/english/20220106/fc0b7e466f81461fbd379c664ed2571d/c.html) **will bathe Mr. Xi in the aura of a statesman**. But the blaze of propaganda will shed few clues about internal deliberations building up to the congress. Secrecy around elite politics is ingrained in Communist Party leaders, and it has deepened under Mr. Xi. They see themselves as guarding China’s rise and one-party power in an often hostile world. Mr. Xi’s power games may only come into broad focus when a new leadership files out on the red carpet of the Great Hall of the People in Beijing at the end of the congress, which is likely to convene in November. Given his desire to keep his options open, Mr. Xi is likely to hold off even then from specifically signaling a successor who would be brought into the Politburo Standing Committee, the party’s innermost circle of power, several experts said. Mr. Xi and the premier, Li Keqiang, vaulted into the Standing Committee in 2007, confirming them as the two leaders-in-waiting at the time. Instead of making a similar move, **Mr. Xi is more likely to bring a cohort of next-generation officials into the full 25-member Politburo — the tier below the Politburo Standing Committee — creating a reserve bench whose loyalty and mettle would be tested in the years to come.** “The action will probably be in the Politburo,” said Mr. Johnson, the former C.I.A. analyst. “Doing anything that would signal a successor now seems unlikely.” China’s history of botched succession plans stands as a warning to Mr. Xi. Mao Zedong and Deng Xiaoping both had an unhappy record of choosing, then turning on, political heirs. Mr. Xi became top leader in 2012 after a year of lurid strife in ruling circles. He [has argued that](https://www.nytimes.com/2013/02/15/world/asia/vowing-reform-chinas-leader-xi-jinping-airs-other-message-in-private.html) the fall of the Soviet Union resulted from installing weak, unworthy leaders who betrayed the Communist cause. “Whether a political party and a country can constantly nurture outstanding leadership talent to a great extent determines whether it rises or falls,” Chen Xi, the party’s head of organizational affairs, wrote late last year [in People’s Daily](http://paper.people.com.cn/rmrb/html/2021-12/01/nw.D110000renmrb_20211201_1-06.htm), the party’s newspaper. Mr. Xi has already sought to prevent undercurrents of discontent from converging into opposition before the congress. **In November, he** [**oversaw a resolution**](https://www.nytimes.com/live/2021/11/11/world/china-xi-jinping-cpc) **on Communist Party history that gave a glowing affirmation of his years in power. Praise in such a weighty document will help deter pushback, and Mr. Xi has used it to** [**demand “absolute loyalty**](http://www.qstheory.cn/dukan/qs/2022-01/01/c_1128219233.htm)**” to the party from members. A recent** [**video series**](https://www.globaltimes.cn/page/202201/1246099.shtml)**, parading officials felled for corruption and abuses of power, reinforced the warning. “All the machinery of coercion is in his hands,”** [**Lance Gore**](https://nus.academia.edu/LanceGore/CurriculumVitae)**, a senior research fellow at the East Asian Institute of the National University of Singapore, said of Mr. Xi. “He’s offended a lot of people, but nobody is in a position to contend with him, openly or even covertly.”** Even so, Mr. Xi does not have carte blanche over the next leadership lineup. Other officials could press on his policy missteps to quietly seek more say, Mr. Johnson said. And **Mr. Xi’s own interests may also lie in showing some give and take, so different groupings feel they have a seat at the top table. “It’s not necessarily winner-takes-all,” said** [**Timothy Cheek**](https://history.ubc.ca/profile/timothy-cheek/)**, a historian of the Chinese Communist Party at the University of British Columbia. “He’s leaving room so that other people are somewhat accommodated.”** Even if politics goes smoothly, who retires and who rises presents Mr. Xi with tricky trade-offs. At the last party congress in 2017, leaders did not pick a successor to Mr. Xi, upending the ladder-like handover of power that had been taking shape in previous decades. Some of Mr. Xi’s protégés may now be too old to stay in the race, while promising younger officials remain untested, and generally unknown. Under an informal age ceiling for senior party posts, two of the seven members of the Politburo Standing Committee — the top tier of power — are likely to retire: Vice Premier Han Zheng and the head of the Chinese legislature, Li Zhanshu. That unspoken rule says that members who are 68 or older should step down when a congress comes around. Mr. Xi could also engineer more retirements, [including of the premier, Li Keqiang](https://www.uscc.gov/sites/default/files/2022-01/Neil_Thomas_Testimony.pdf), or expand the size of the Standing Committee, which is not fixed by rule. Possible recruits into the top body include Chen Min’er, Hu Chunhua, and Ding Xuexiang. All are Politburo members young enough to serve 10 years in the Standing Committee under the age rules. So far, though, none has received a telltale pre-congress move that suggests Mr. Xi has special plans for him, such as a high-profile transfer or a propaganda push. Party insiders once described Mr. Chen [as a favorite](https://www.nytimes.com/2017/09/12/world/asia/china-xi-jinping-successor-chen-miner.html) and possible heir of Mr. Xi. But Mr. Chen already seems too old to win elite approval, said Bo Zhiyue, a consultant in New Zealand who studies Chinese elite politics. Mr. Chen will be 67 in 2027, a year when Mr. Xi could step down at a party congress. Mr. Xi was 59 when he became leader at a congress in 2012. Mr. Xi “has to bring in new people, but he doesn’t want any of them labeled as his successor,” Mr. Bo said. “There’s the big dilemma for Xi Jinping — how to promote them but not too far and limit his options.” There is likely to be much more turnover in the full Politburo, the second-highest rung of power. Retirements there could create 11 vacancies, which Mr. Xi could use to promote a cohort of loyal officials in their 50s or early 60s, many [now provincial leaders](https://macropolo.org/chinese-politics-rising-stars-provincial/). But if Mr. Xi stays at the top for another decade or longer, they may also be passed over for even younger potential successors now working in obscurity in ministries and local administrations. **“If Xi stays healthy and avoids policy disasters, he could remain a capable national leader and a formidable political operator for another couple of decades,**” said [Neil Thomas](https://www.eurasiagroup.net/people/nthomas), who analyses Chinese politics for the Eurasia Group.

#### The plan alienates the PLA – they perceive space dominance as key to military strength

Dean Cheng 19, Senior Research Fellow graduated from Princeton with a BA in politics and MIT, Asian Studies Center, 4/9/19, “Prospects for U.S.-China Space Cooperation”, https://www.heritage.org/testimony/prospects-us-china-space-cooperation

Moreover, in keeping with the Chinese memory of the “Century of Humiliation,” Beijing will want any cooperative venture to be, at a minimum, on a co-equal basis. For the PRC to be treated as anything other than a full member in any program or effort would smack of the “unequal treaties” that marked China’s interactions with the rest of the world between 1839 and 1949. For the same reason, China has generally been reluctant to join any organization or regime in which it was not party to negotiating. For the CCP, whose political legitimacy rests, in part, on the idea that it has restored Chinese pride and greatness, this is likely to be a significant part of any calculation.

At the same time, space is now a sector that enjoys significant political support within the Chinese political system. Based on their writings, the PLA is clearly intent upon developing the ability to establish “space dominance,” in order to fight and win “local wars under informationized conditions.”[8] The two SOEs are seen as key parts of the larger military-industrial complex, providing the opportunities to expose a large workforce to such areas as systems engineering and systems integration. It is no accident that China’s commercial airliner development effort tapped the top leadership of China’s aerospace corporations for managerial and design talent.[9] From a bureaucratic perspective, this is a powerful lobby, intent on preserving its interests.¶ China’s space efforts should therefore be seen as political, as much as military or economic, statements, directed at both domestic and foreign audiences. Insofar as the PRC has scored major achievements in space, these reflect positively on both China’s growing power and respect (internationally) and the CCP’s legitimacy (internally). Efforts at inducing Chinese cooperation in space, then, are likely to be viewed in terms of whether they promote one or both objectives. As China has progressed to the point of being the world’s second-largest economy (in gross domestic product terms), it becomes less clear as to why China would necessarily want to cooperate with other countries on anything other than its own terms.¶ Prospects for Cooperation

Within this context, then, the prospects for meaningful cooperation with the PRC in the area of space would seem to be extremely limited. China’s past experience of major high-technology cooperative ventures (Sino–Soviet cooperation in the 1950s, U.S.–China cooperation in the 1980s until Tiananmen, and Sino–European space cooperation on the Galileo satellite program) is an unhappy one, at best. The failure of the joint Russian–Chinese Phobos–Grunt mission is likely seen in Beijing as further evidence that a “go-it-alone” approach is preferable.

Nor is it clear that, bureaucratically, there is significant interest from key players such as the PLA or the military industrial complex in expanding cooperation.[10] Moreover, as long as China’s economy continues to expand, and the top political leadership values space efforts, there is little prospect of a reduction in space expenditures—making international cooperation far less urgent for the PRC than most other spacefaring states.

If there is likely to be limited enthusiasm for cooperation in Chinese circles, there should also be skepticism in American ones. China’s space program is arguably one of the most opaque in the world. Even such basic data as China’s annual space expenditures is lacking—with little prospect of Beijing being forthcoming. As important, China’s decision-making processes are little understood, especially in the context of space. Seven years after the Chinese anti-satellite (ASAT) test, exactly which organizations were party to that decision, and why it was undertaken, remains unclear. Consequently, any effort at cooperation would raise questions about the identity of the partners and ultimate beneficiaries—with a real likelihood that the PLA would be one of them.

#### China’s “space dream” is key to Xi credibility – plan is a flip flop that undermines legitimacy

Kharpal 21 – senior technology correspondent based in Guangzhou, China at CNBC [Arjun, “China once said it couldn’t put a potato in space. Now it’s eyeing Mars,” 6/30/2021, https://www.cnbc.com/2021/06/30/china-space-goals-ccp-100th-anniversary.html]

Fast forward more than six decades and President Xi Jinping, China’s current leader, is seen congratulating three astronauts who were sent to the country’s own space station earlier this month.

Since Mao’s comments, China has launched satellites, sent humans to space and is now planning to build a base on Mars, achievements and ambitions Beijing has highlighted as the centennial of the CCP’s founding approaches.

Space is now another battleground between the U.S. and China amid a broader technological rivalry for supremacy, one that could have scientific and military implications on Earth.

“President Xi Jinping has declared that China’s ‘Space Dream’ is to overtake all nations and become the leading space power by 2045,” said Christopher Newman, professor of space law and policy at the U.K.’s Northumbria University. “This all feeds into China’s ambition to be the world’s single science and technology superpower.”

Why space?

In March, China highlighted space as a “frontier technology” it would focus on and research into the “origin and evolution of the universe.”

But there are other implications too.

“It is important for China and the US because it can advance technological development” in areas such as “national security and some socioeconomic development,” according to Sa’id Mosteshar, director of the London Institute of Space Policy and Law, and research fellow Christoph Beischl.

While experts doubt it could spiral into war in space, extra-terrestrial activities can support military operations on Earth.

Space achievements are also about the optics.

Through space exploration to the Moon or to Mars, “China and the U.S. display their technological sophistication to the domestic audience and the world, increasing their domestic and international prestige, domestic legitimacy and international influence,” Mosteshar and Beischl said.

#### That factionalizes the CCP and emboldens challenges to Xi – the PLA is increasingly powerful and not unconditionally subservient

Simpson 16 [(Kurtis, Centre Director with Defence Research and Development Canada, has been conducting research on China’s leadership, Communist Party politics, the People’s Liberation Army and foreign policy for over 30 years,Master’s Degree and a Ph.D from York University, previously served as an intelligence analyst at the Privy Council Office and leader of the Asia Research Section at the Department of National Defence’s Chief Defence Intelligence (CDI) organization) “China’s Re-Emergence: Assessing Civilian-Military Relations In Contemporary Era – Analysis,” Eurasia Review, 12/21/2016] JL

Paralleling divided loyalties between Chinese Party, military and government bodies, one must also recognize that within each, factions exist, based upon generational, personal, professional, geographic, or institutional allegiances.19 These minor fault lines are most pronounced during crises, and they continue independent of professionalization.20 As was demonstrated by the civil-military dynamics of the Chinese government’s suppression of student demonstrators, both divisions and allegiances of interests emerged with respect to how to contain this situation and factional interests largely determined which troops would carry out the orders, who commanded them, what civilian Party leaders supported the actions, and who would be sanctioned following the mêlée. A consequence of factionalism within the PLA is that the Party’s control mechanisms (particularly because rule of law and constitutional restraints on the military are weak) needs to be robust to control not only a single military chain of command but (particularly during crises) perhaps more than one. This is not likely the case. A review of the evidence indicates the military’s influence, on the whole, is increasing, and the Party’s control decreasing.

On one level, the Party clearly controls the military as the Central Military Commission or CMC (the highest military oversight body in the PRC) is chaired by a civilian, President Xi Jinping. Moreover, the PLAs representation on formal political decision-making bodies (such as the Politburo Standing Committee, the Politburo, the Central Committee, and the NPC) has decreased over the years, but this does not necessary equate to a reduced level of influence. For example, the two Vice-Chairman of the CMC are now military generals, as are the remaining other eight members. Irrespective of institutional membership, military leaders retain considerable say. Personal interactions and informal meetings with senior party elites provide venues to sway decisions. They do, also, hold important places on leading small groups dedicated to issues like Taiwan and other security questions, such as the South China Seas.21

In a similar vein, other methods of Party influence, as exercised through political commissars, party committees, and discipline inspection commissions are no longer empowered to enforce the ideological dictates of a paramount leader. In the face of diffuse reporting chains, competing allegiances, and often effective socialization by the military units they are supposed to be watching over, most do not provide the Party guardian and guidance function once so pervasive.

While perhaps overstated, Paltiel’s observation that “…China’s energies over the past century and half have given the military a prominent and even dominant role in the state, preempting civilian control and inhibiting the exercise of constitutional authority” is likely now truer than ever before in history.22 While still loyal to the party as an institution, the PLA is not unconditionally subservient to a particular leader and retains the resources to enter the political arena if (at the highest levels) a decision is made to do so.

The civilian-military trend lines evident in China since the end of the Cultural Revolution affirm that the symbiotic nature of the Party-PLA relationship has morphed in important respects since the late 1960s. The promotion of professionalism, a reduced role for ideological indoctrination, an increasing bifurcation of civil-military elites, and growing state powers (complete with divided loyalties and continued factionalism) has complicated the political landscape informing how the CCP interacts with the PLA. If, as postulated, we have moved from a fused, ‘dual role elite’ model to one of ‘conditional compliance’ in which the military actually holds a preponderance of the power capabilities and where its interests are satisfied through concessions, bargaining, and pay-offs, empirical evidence should reflect this. A review of China’s three major leadership changes since the transition from the revolutionary ‘Old Guard’ to the modern technocrats confirms this.

Formally anointed and legitimized by Deng in 1989, Jiang assumed leadership without military credentials and few allies, viewed by many as a ‘caretaker’ Party Secretary in the wake of the Tiananmen Massacre. Despite his limitations, Jiang was well versed in the vicissitudes of palace politics. Informed by a high political acumen, he immediately promoted an image as an involved Commander-in-Chief, personally visiting all seven military regions, a sign of commitment not made by either the likes of Mao or Deng. Symbolic gestures like this were bolstered by his providing incentives to the PLA, such as: consistent raises in the defence budget; funds for military modernization; as well as equipment, logistics, and augmented R&D.23

Referred to as the ‘silk-wrapped needle,’ Jiang marshalled Party resources to not only reward, but to punish.24 His institutional authority over appointments enabled him to manipulate factions, dismiss those who opposed him, enforce new rigid retirement standards, and promote loyalists. A delicate equilibrium was established during the early-1990s until his semi-retirement in 2004,25 where Jiang guaranteed military priorities such as supporting ‘mechanization’ and an ‘information-based military’ (promoting the concept of RMA with Chinese characteristics) in exchange for the PLA backing of his legacy contributions to Marxist Leninist Mao Zedong thought with the enshrinement of his “Three Represents” doctrine.

Like Jiang, Hu Jintao’s succession was the product of negotiation, compromise, and concessions. While neither opposed by the PLA, nor supported by the military ‘brass,’ Hu was a known commodity, having served as Vice-President (1998) and CMC Vice-Chairman since 1999. He was deemed acceptable until proven otherwise. In the shadow of Jiang (who retained the position of CMC Chair until 2004), Hu did not exert the same kind of influence in, nor engender the same kind of deference from, China’s military, but equally proved capable of fostering a pragmatic relationship with the army which ensured its interests, and in so doing, legitimized his leadership position.

Ceding much of the military planning and operational decisions to the PLA directly, Hu played to his strengths and focused upon national security issues (such as the successful resolution of SARs in China), which bolstered his credibility as a populist leader among the masses, indirectly increasing his power within both the military and the Party. Additionally, he focused upon foreign military security affairs (most notably, North Korea-US negotiations), which enabled him to link his personal political agenda with the military’s latest ambitions.

In according the military a distinct place in China’s national development plan, supporting China’s rise, and ensuring its vital interests, Hu recognized the military’s evolving requirement to ‘go global’ and its worldwide interests in non-combat operations, such as peacekeeping and disaster relief, as well as stakes in the open seas, outer space, and cyberspace as interest frontiers with no geographic boundaries.26 Under the slogan of ‘China’s historical mission in the new phase of the new century’ and his acquiescence to the PLA’s stated requirements ‘to win local wars under modern conditions’ by funding new technology acquisition, Hu received the army’s formal recognition for his contributions to military thought based upon “scientific development” which informed a “strategic guiding theory,” resulting in a new operational orientation for China’s military. Emulating his predecessor, Hu won ‘conditional compliance’ from the PLA by successfully bartering military needs and wants for the army’s support and endorsement of his political tenure. This was not done outside of self-interest. Hu, as did Jiang, skillfully coopted, fired, and promoted select Generals to serve his greater ends, and he did this through varied means. Ultimately, however, it was done in a manner acceptable to the military.

Xi Jinping’s rise to power in 2012, while replicating the ‘horse-trading’ of Jiang and Hu, marks a fundamental departure in leadership style. Often described as a transformative leader, Xi is openly critical of his predecessors and rails against earlier periods where reform stalled and corruption grew.27 An advocate of ‘top-level design,’ incrementalism is being supplanted by a massive attempt to centralize all aspects of the CCP’s power, which includes a major restructuring of the economy, government, administration, and military.

Nicknamed “the gun and the knife” as a slight for his attempts to simultaneously control the army, police, spies, and the ‘graft busters,’ Xi’s power appears uncontested at present. Nevertheless, he is also viewed as ‘pushing the envelope too far’ and endangering the equilibrium which has been established between the Party and PLA over the past 25 years. For example, only two years into his mandate, he fostered a Cult of Personality, “the Spirit of Xi Jinping” which was officially elevated to the same standing as that of Mao and Deng, by comparison, foundational figures in Chinese history. His open attacks of political ‘enemies’ (most notably Zhou Yongkang, a Politburo Standing Committee member and former security czar) breeds fear among almost every senior official, all of whom are vulnerable on some point. Equally true, an unprecedented anti-corruption campaign is inciting comrades to turn on comrades, not unlike a massive game of prisoner’s dilemma.

Nowhere is the pressure for reform greater than in the PLA. Xi advocates administering the army with strictness and austerity, promoting frugality and obedience. At his direction, “mass-line educational campaigns” designed to “rectify work style” through criticism and self-criticism are being implemented.28 Ideological and political building is now equated with army building, as a means of ensuring the Party’s uncontested grip over the troops ideologically, politically, and organizationally. Select military regions (those opposite Taiwan and adjacent to the South China Seas) and commanders from those regions are witnessing favoritism and promotion at the expense of others. Moreover, a new “CMC Chairmanship Responsibility System” has been instituted, which directly calls into question the support of some of Xi’s senior-most generals.

A ‘hardliner’ by nature, Xi recognizes that he must earn the support of the PLA. New military priorities he supports include: accelerating modernization; Joint Command and C4ISR; training; talent management, as well as equipment and force modernization. That said, his goal of achieving the Chinese dream of building a “wealthy, powerful, democratic, civilized, and harmonious socialist modernized nation” by 2021, the 100th anniversary of the founding of the CCP, is exceptionally ambitious. It will require endless commitments to competing interests in a period of economic stagnation and global economic downturn. Should the PLA come to believe they are not first in line for government largess, support for Xi could erode very quickly.29

#### CCP instability collapses the international order – extinction

Perkinson 12 [(Jessica, MA in international affairs from American University) “The Potential for Instability in the PRC: How the Doomsday Theory Misses the Mark,” American University School of International Service, 2012] JL

Should the CCP undergo some sort of dramatic transformation – whether that be significant reform or complete collapse, as some radical China scholars predict2 – the implications for international and US national security are vast. Not only does China and the stability of the CCP play a significant role in the maintenance of peace in the East Asian region, but China is also relied upon by many members of the international community for foreign direct investment, economic stability and trade. China plays a key role in maintaining stability on the Korean Peninsula as one of North Korea’s only allies, and it is argued that instability within the Chinese government could also lead to instability in the already sensitive military and political situation across the Taiwan Strait. For the United States, the effect of instability within the CCP would be widespread and dramatic. As the United States’ largest holder of US treasury securities, instability or collapse of the CCP could threaten the stability of the already volatile economic situation in the US. In addition, China is the largest trading partner of a number of countries, including the US, and the US is reliant upon its market of inexpensive goods to feed demand within the US.

It is with this in mind that China scholars within the United States and around the world should be studying this phenomenon, because the potential for reform, instability or even collapse of the CCP is of critical importance to the stability of the international order as a whole. For the United States specifically, the potential - or lack thereof - forreform of the CCP should dictate its foreign policy toward China. If the body of knowledge on the stability of the Chinese government reveals that the Chinese market is not a stable one, it is in the best interests of the United States to look for investors and trade markets elsewhere to lessen its serious dependence on China for its economic stability, particularly in a time of such uncertain economic conditions within the US.

## 6

### 1nc – da

#### Russia is ravenously pursuing global space coop to erode US supremacy, undermine allied resolve, and build support for regional aggression – surrendering pressure causes future conflict and gray zone escalation – the link alone turns case

Listner 18 [Michael J. Listner is an attorney, the founder and principal of the legal and policy think-tank/consultation firm Space Law and Policy Solutions, and the author and editor of the subscription space law and policy briefing-letter, The Précis. 9/17/18, "The art of lawfare and the real war in outer space." <http://www.thespacereview.com/article/3571/1>]

A battle for primacy in outer space took place on August 14, 2018, among the Russian Federation, the United States, and, indirectly, the People’s Republic of China. This battle did not involve the exotic technology of science fiction, antisatellite weapons (ASATs), or the incapacitation of satellites; it was not part of a hot war and did not even occur in outer space. Rather, it took place in the halls of the Conference of Disarmament in Geneva, Switzerland, and concerned the interdiction of the hypothetical deployment of instrumentalities of a hot war in outer space. The carefully orchestrated arena for this battle by the proponents of banning so-called space weapons involved methodologies, institutions, and agents of international law but was undermined by a vigorous counterattack by the United States using the same forum and suite of instruments so skillfully levied against it.1 This battle, of course, is not a single instance but the latest skirmish of a much larger conflict involving real war in space.

There’s been significant attention—and overstatement— about the effect of a proposed Space Force by the United States, including an arms race and dominance as articulated by the United States,2 yet little attention has been given to the contest that continues to be fought over outer space using the tools of international law and policy, both of which are instruments of “lawfare.” Maj. General Charles N. Dunlap, Jr. (retired)3 first defined lawfare in the paper “Law and Military Interventions: Preserving Humanitarian Values in 21st Conflicts,” as “a method of warfare where law is used as a means of realizing a military objective.”4 This definition can be expanded to the use of hard law, soft law, and non-governmental organizations and institutions within the international arena to achieve a national objective and geopolitical end that would otherwise require the use of hard power. As observed by General Dunlap, lawfare imputes the teachings of Sun Tzu in particular this teaching: “The supreme art of war is to subdue the enemy without fighting.”5 Lawfare is not a new concept and has been used in many domains, but the tools brought to bear have become more prolific, and the domain of outer space has been and continues to be a theater where it is applied. The earliest example of lawfare (even though the term was not yet coined) in outer space occurred pre-Sputnik with Soviet Union attempting to use customary law to make claims of sovereignty extending beyond the atmosphere to the space above its territory. This claim was preempted by the launch of Sputnik 1 and the act of the satellite flying over the territory of other nations.6 The Eisenhower Administration saw this as an opportunity to meet a national space policy goal and likewise used customary law as an implement of lawfare and successfully created the principle of free access to outer space, which it utilized for photoreconnaissance activities in lieu of overflights of another nation’s sovereign airspace.7 The Soviet Union unsuccessfully attempted to defeat this move using lawfare in the United Nations through a proposal that would have prohibited the use of outer space for the purpose of intelligence gathering.8 Since that setback, the art of lawfare in outer space has settled on the objective ascribed to another teaching of Sun Tzu:

“With regard to precipitous heights, if you proceed your adversary, occupy the raised and sunny spots, and there wait for him to come up. Remember, if the enemy has occupied precipitous heights before you, do not follow him, but retreat and try to entice him away.”9

The second part of this teaching exemplifies the role of lawfare in the present war in outer space: to employ the tools and institutions of international law as a means to legally corner an adversary and gain geopolitical advantage in soft power, with the aim of slowing and eroding the advantage that adversary has attained through preeminence in the domain of outer space, and replace it with their own. This objective is accomplished by two general means: legally-binding measures, most commonly in the form of treaties, and so-called non-binding measures couched as sustainability.

Lawfare in space continued in the intervening years between Sputnik-1 and the signature and ratification of the Outer Space Treaty and afterward. The weapon of choice: disarmament proposals for outer space. Provisions for banning so-called space weapons in the Outer Space Treaty were rejected by the Soviet Union in favor of separate arms control measures.10 These measures included proposals, some of which related to the proscription of ASATs, designed to not only gain an advantage in outer space but to gauge political intent and resolve.11

The lawfare offensive escalated after the proposed Strategic Defense Initiative with an effort curtail space-based missile defense technology through a ban on so-called space weapons and a proverbial arms race in outer space. The Prevention of an Arms Race in Outer Space (PAROS), introduced in 1985, continues to seek a legally binding measure to place any weapon in outer space, including those designed for self-defense. It spawned measures such as the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects (PPWT), co-sponsored by Russia and China. This and other measures have met resistance as unverifiable and certainly are not likely to gain the advice and consent of the US Senate for ratification. The end game of the use of lawfare in the form of efforts like PAROS—the latest attempt at which was defeated in Geneva—is to propose legally binding measures that proponents would ignore to their advantage in any event. The sponsors and advocates of these hard-law measures recognize they will not come to fruition but, in the process of promoting them, will enhance their soft power and moral authority, which can be applied to entice their adversary down.

Non-binding resolutions and measures in the form of political agreements and guidelines are being used concurrently in the lawfare engagement in outer space, where proposals for legally binding measures alone fall short of the goal of creating hard law and challenging dominance in outer space. These resolutions and measures, which emphasize sustainability, are designed to perform an end run around the formalities of a treaty to entice agreement on issues that would otherwise be unacceptable in a hard-law agreement. These measures have the dual effect to create soft-power support on the one hand and hard law on the other. This tool of lawfare, which uses clichés of cooperation and sustainability, is a ploy that applies the ambiguous nature of customary international law to achieve what cannot be done through treaties: to “entice the adversary away” and create legal and political constraints to bind and degrade its use of outer space or prevent it from maintaining its superiority, all the while allowing others to play catchup and replace one form of dominance with another. While lawfare is by nature asymmetric, this indirect approach could be considered a subset an irregular tactic of lawfare, as opposed to the use of formal treaties in lawfare.

#### That causes several nuclear wars

Burrows 17 [Mathew J. Burrows, Director, Foresight, Strategy, and Risks Initiative at the Atlantic Council. Western Options in a Multipolar World. November 2017. https://www.atlanticcouncil.org/images/Western\_Options\_in\_a\_Multipolar\_World\_web\_1127.pdf]

Multipolarity has historically been less stable than when there has been a strong hegemon or even a bipolar distribution of power. Today's world is not just characterized by a growing number of state actors in the world—symbolized by displacement of the Group of Seven (G7) with the Group of Twenty (G20) leading industrialized and emerging economies—but also by a diffusion of power to non-state actors, some of whom have the means for inflicting violence on a level that used to be the monopoly of states. With robotics and biotechnology, the trend of growing non-state lethality will only grow. Terrorists and insurgents have already gained access to precision-strike capabilities and cyber instruments. The Middle East is where the better-armed, non-state actors are concentrated, but terrorism has a long arm and many groups are routinely hitting European and US targets.

Major state conflict—which has not occurred on a large scale since the Korean War—has historically occurred more often in less-stable multipolar worlds. Recent work by Harvard University’s Graham Allison points to the likelihood of challengers to any global system ending up in a fight with the declining hegemon.9 There are only a couple instances of a peaceful transition-such as happened after the Second World War—when the declining hegemon—Britain—handed off its global role to the rising star—the United States. In cases where there is not a peaceful arrangement, mounting tensions between challenger and hegemon easily tip over into open conflict.

Nuclear weapons acted to limit the scope of US-Soviet Union conflicts but the worry today is that certain nuclear-capable states—India, Pakistan, and North Korea—do not have the same built-in inhibitions that developed during the early phase of the Cold War. If the North Korean regime faced a threat to its survival, it would most likely use nuclear weapons. While the Soviet Union had a “no first use” policy, Russia has recently developed a new military doctrine that justifies a limited nuclear strike if faced with a large-scale conventional attack that exceeded its ability to reverse. To Russian thinking, the limited nuclear strike would de-escalate a conflict, but it could do the opposite.

Competing visions of how the international order should be run are a feature of the current multipolarity. Rising powers, led by Russia and China, in particular dispute Western norms and policies that undercut national sovereignty. They decry Western democracy-promotion efforts, citing the instability that has resulted from regime changes in Iraq and Libya and comparing Western unseating of rulers to the colonialism of the nineteenth century. Hence, there has been no agreement by the five permanent members (P5'°) of the United Nations Security Council (UNSC) on ending the Syrian civil war—one of the largest humanitarian disasters in modern history—because of Russian and Chinese worries that it would set another precedent for deposing an authoritarian leader.

## Case

### Uv

#### They don’t get 1AR theory:

#### 1. Irresolvable – all the 2AR responses are new which means they can blow

#### up a 15 sec 1AR shell to 3 minutes and the NR can’t reasonably predict –

#### means it requires judge intervention to resolve

#### 2. Time skew – it flips time skew aff because they get 7 minutes and to my

#### 6 and I have to split my 2NR to respond

#### 3. 1AC theory solves – read your interps in an underview

#### If they do get 1AR theory,

#### Use reasonability

#### Aff skew -- 1AR theory is crazy aff biased because the 2AR gets to lbl

#### every 2NR standard with new answers that never get responded to– the

#### neg needs some strategic advantage in order to check back 2AR

#### sandbagging and reasonability is goldilocks because it prevents crazy

#### abusive 1NCs cuz they’re unreasonable but also gives the 2N a fighting

#### chance

#### Second, drop the arg:

#### They can blow up a blippy 30 shell to 3 min of the 2AR while I have to

#### split my time and can’t preempt or answer 2AR spin which necessitates

#### judge intervention and means 1AR theory is irresolvable so you shouldn’t

#### stake the round on it

### Solvency

#### Vote neg on presumption – the aff does nothing. Indicating outer space as recognized as a global commmons does nothing to actually rectify the material conditions of outer space debris because recongition isnt the same thing as actually banning/regulating mining

#### Vollmer doesn’t substantiate solvency – just indicates that a commons is feasible

#### The commons can't scale up from earth - the scale of space and its “supranational” nature which ensures circumvention

Lambach and Wesel 19 [Daniel Lambach(1), Luca Wesel(2), xx-xx-2019"TACKLING THE SPACE DEBRIS PROBLEM: A GLOBAL COMMONS PERSPECTIVE" Research Centre Normative Orders, Goethe University, https://conference.sdo.esoc.esa.int/proceedings/sdc8/paper/230]

However, it is not clear how well these results can be applied to large-scale resources. The case studies of the “Governing the Commons” project focused on local communities within the framework of states, leading to questions how to “scale up” the project’s findings [14, 15]. This is where the notion of “global commons”, i.e. “resource domains to which all nations have legal access” [16] has emerged. Space is one example of a global commons, with others being the high seas and the seafloor, the poles, and the atmosphere.

The challenge of governing the global commons lies in their scale and their supranational nature. Their immense scale makes many well-known strategies of commons management unviable, such as the development of reputation and trust systems as well as the emergence of a shared culture of “commoning” [17]. Their supranational nature exacerbates the underlying collective action problems. In the absence of a superior political authority, states face few sanctions for not agreeing to, or not complying with a governance regime [18]. Hence, any analysis of the global commons must pay attention to issues of power – more so than standard approaches to commons management [19].

#### There’s zero legal basis or enforcement mechanism for space as a “commons” – circumvention is inevitable

Herzfeld et al 15 [(Dr. Henry, Research Professor of Space Policy and International Affairs at George Washington University) “How Simple Terms Mislead Us: The Pitfalls of Thinking about Outer Space as a Commons,” Secure World Foundation, 2015] JL

Furthermore, there is a logical contradiction in this discussion about outer space being treated as a commons. If a commons needs a sovereign government to grant the open territory to the use of all people, it is that government that has to oversee, regulate, and enforce that charter. Art. II of the OST prohibits national sovereignty in outer space. Thus, it is an area without a government. Even if all nations regard outer space as a “commons,” it is a very different concept from any commons that has been established in the past. There is no real legal precedent, no true means of oversight or enforcement, and therefore should not be confused with any of the many ways that concept has been applied to the territory or oceans of the Earth. Thinking about space as a global commons may be a laudatory ideal, and one that perhaps can be regarded as a very long-term goal for society. But, it is hardly a practical solution or goal for the problems we face today, witnessed by at least a thousand years of precedent in law and practice coupled with radically different technologies, exponential world population growth from 500 million people (at most) in Roman times and the Middle Ages to over 7 billion people today,38 and other radical political and social changes.

### Advantage 1 – Debris

#### 1) This advantage is seriously the shortest thing I have ever seen – it’s literally two cards. 1AR will inevitably be new so reject it on face. There is absolutely 0 uniqueness for their scenario because they havent read ev about debris level in the squo

#### 2) MunOz-Patchen is incorrect – this is in the context of small debris but their evidence misses an internal link between debris writ large and extremely tiny ones

#### 3) Munoz concludes squo regulations solve, and the creator of the Kessler syndrome admits that it’s way too far off to matter – inserted in green

**1AC** Chelsea Muñoz-Patchen, 19 - (J.D. Candidate at The University of Chicago Law School., "Regulating the Space Commons: Treating Space Debris as Abandoned Property in Violation of the Outer Space Treaty," University of Chicago, 2019, 12-6-2021, https://cjil.uchicago.edu/publication/regulating-space-commons-treating-space-debris-abandoned-property-violation-outer-space)//AW

Debris poses a threat to functioning space objects and astronauts in space, and may cause damage to the earth’s surface upon re-entry.29 Much of the small debris cannot be tracked due to its size and the velocity at which it travels, making it impossible to anticipate and maneuver to avoid collisions.30 To remain in orbit, debris must travel at speeds of up to 17,500 miles per hour.31 At this speed even very small pieces of debris can cause serious damage, threatening a spacecraft and causing expensive damage.32 There are millions of these very small pieces, and thousands of larger ones.33 The small-to-medium pieces of debris “continuously shed fragments like lens caps, booster upper stages, nuts, bolts, paint chips, motor sprays of aluminum particles, glass splinters, waste water, and bits of foil,” and may stay in orbit for decades or even centuries, posing an ongoing risk.34 Debris ten centimeters or larger in diameter creates the likelihood of complete destruction for any functioning satellite with which it collides.35 Large nonfunctional objects remaining in orbit are a collision threat, capable of creating huge amounts of space debris and taking up otherwise useful orbit space.36 This issue is of growing importance as more nations and companies gain the ability to launch satellites and other objects into space.37 From February 2009 through the end of 2010, more than thirty-two collision-avoidance maneuvers were reportedly used to avoid debris by various space agencies and satellite companies, and as of March 2012, the crew of the International Space Station (ISS) had to take shelter three times due to close calls with passing debris.38 These maneuvers require costly fuel usage and place a strain on astronauts.39 Furthermore, the launches of some spacecraft have “been delayed because of the presence of space debris in the planned flight paths.”40 In 2011, Euroconsult, a satellite consultant, projected that there would be “a 51% increase in satellites launched in the next decade over the number launched in the past decade.”41 In addition to satellites, the rise of commercial space tourism will also increase the number of objects launched into space and thus the amount of debris.42 The more objects are sent into space, and the more collisions create cascades of debris, the greater the risk of damage to vital satellites and other devices relied on for “weather forecasting, telecommunications, commerce, and national security.”43 The Space Debris Mitigation Guidelines44 were created by UNCOPUOS with input from the IADC and adopted in 2007.45 The guidelines were developed to address the problem of space debris and were intended to “increase mutual understanding on acceptable activities in space.”46 These guidelines are nonbinding but suggest best practices to implement at the national level when planning for a launch. Many nations have adopted the guidelines to some degree, and some have gone beyond what the guidelines suggest.47 While the guidelines do not address existing debris, they do much to prevent the creation of new debris. The Kessler Syndrome is the biggest concern with space debris. The Kessler Syndrome is a cascade created when debris hits a space object, creating new debris and setting off a chain reaction of collisions that eventually closes off entire orbits.48 The concern is that this cascade will occur when a tipping point is reached at which the natural removal rate cannot keep up with the amount of new debris added.49 At this point a collision could set off a cascade destroying all space objects within the orbit.50 In 2011, The National Research Council predicted that the Kessler Syndrome could happen within ten to twenty years.51 Donald J. Kessler, the astrophysicist and NASA scientist who theorized the Kessler Syndrome in 1978, believes this cascade may be a century away, meaning that there is still time to develop a solution.52

#### 4) Johnson also doesn’t indicate that there is an external impact to any of these scenarios – means they don’t escalate and reading new t4erminals would be new in the 1AR just like reading an add-on

#### 5) Alt causes to Johnson they can’t solve – Green

Les 1AC Johnson 13, Deputy Manager for NASA's Advanced Concepts Office at the Marshall Space Flight Center, Co-Investigator for the JAXA T-Rex Space Tether Experiment and PI of NASA's ProSEDS Experiment, Master's Degree in Physics from Vanderbilt University, Popular Science Writer, and NASA Technologist, Frequent Contributor to the Journal of the British Interplanetary Sodety and Member of the American Institute of Aeronautics and Astronautics, National Space Society, the World Future Society, and MENSA, Sky Alert!: When Satellites Fail, p. 9-12 [language modified]

Whatever the initial cause, the result may be the same. A satellite destroyed in orbit will break apart into thousands of pieces, each traveling at over 8 km/sec. This virtual shotgun blast, with pellets traveling 20 times faster than a bullet, will quickly spread out, with each pellet now following its own orbit around the Earth. With over 300,000 other pieces of junk already there, the tipping point is crossed and a runaway series of collisions begins. A few orbits later, two of the new debris pieces strike other satellites, causing them to explode into thousands more pieces of debris. The rate of collisions increases, now with more spacecraft being destroyed. Called the "Kessler Effect", after the NASA scientist who first warned of its dangers, these debris objects, now numbering in the millions, cascade around the Earth, destroying every satellite in low Earth orbit. Without an atmosphere to slow them down, thus allowing debris pieces to bum up, most debris (perhaps numbering in the millions) will remain in space for hundreds or thousands of years. Any new satellite will be threatened by destruction as soon as it enters space, effectively rendering many Earth orbits unusable. But what about us on the ground? How will this affect us? Imagine a world that suddenly loses all of its space technology. If you are like most people, then you would probably have a few fleeting thoughts about the Apollo-era missions to the Moon, perhaps a vision of the Space Shuttle launching astronauts into space for a visit to the International Space Station (ISS), or you might fondly recall the "wow" images taken by the orbiting Hubble Space Telescope. In short, you would know that things important to science would be lost, but you would likely not assume that their loss would have any impact on your daily life. Now imagine a world that suddenly loses network and cable television, accurate weather forecasts, Global Positioning System (GPS) navigation, some cellular phone networks, on-time delivery of food and medical supplies via truck and train to stores and hospitals in virtually every community in America, as well as science useful in monitoring such things as climate change and agricultural sustainability. Add to this the [disabling] ~~crippling~~ of the US military who now depend upon spy satellites, space-based communications systems, and GPS to know where their troops and supplies are located at all times and anywhere in the world. The result is a nightmarish world, one step away from nuclear war, economic disaster, and potential mass starvation. This is the world in which we are now perilously close to living. Space satellites now touch our lives in many ways. And, unfortunately, these satellites are extremely vulnerable to risks arising from a half-century of carelessness regarding protecting the space environment around the Earth as well as from potential adversaries such as China, North Korea, and Iran. No government policy has put us at risk. It has not been the result of a conspiracy. No, we are dependent upon them simply because they offer capabilities that are simply unavailable any other way. Individuals, corporations, and governments found ways to use the unique environment of space to provide services, make money, and better defend the country. In fact, only a few space visionaries and futurists could have foreseen where the advent of rocketry and space technology would take us a mere 50 years since those first satellites orbited the Earth. It was the slow progression of capability followed by dependence that puts us at risk. The exploration and use of space began in 1957 with the launch of Sputnik 1 by the Soviet Union. The United States soon followed with Explorer 1. Since then, the nations of the world have launched over 8,000 spacecraft. Of these, several hundred are still providing information and services to the global economy and the world's governments. Over time, nations, corporations, and individuals have grown accustomed to the services these spacecraft provide and many are dependent upon them. Commercial aviation, shipping, emergency services, vehicle fleet tracking, financial transactions, and agriculture are areas of the economy that are increasingly reliant on space. Telestar 1, launched into space in the year of my birth, 1962, relayed the world's first live transatlantic news feed and showed that space satellites can be used to relay television signals, telephone calls, and data. The modern telecommunications age was born. We've come a long way since Telstar; most television networks now distribute most, if not ali, of their programming via satellite. Cable television signals are received by local providers from satellite relays before being sent to our homes and businesses using cables. With 65% of US households relying on cable television and a growing percentage using satellite dishes to receive signals from direct-to-home satellite television providers, a large number of people would be cut off from vital information in an emergency should these satellites be destroyed. And communications satellites relay more than television signals. They serve as hosts to corporate video conferences and convey business, banking, and other commercial information to and from all areas of the planet. The first successful weather satellite was TIROS. Launched in 1960, TIROS operated for only 78 days but it served as the precursor for today's much more long-lived weather satellites, which provide continuous monitoring of weather conditions around the world. Without them, providing accurate weather forecasts for virtually any place on the globe more than a day in advance would be nearly impossible. Figure !.1 shows a satellite image of Hurricane Ivan approaching the Alabama Gulf coast in 2004. Without this type of information, evacuation warnings would have to be given more generally, resulting in needless evacuations and lost economic activity (from areas that avoid landfall) and potentially increasing loss of life in areas that may be unexpectedly hit. The formerly top-secret Corona spy satellites began operation in 1959 and provided critical information about the Soviet Union's military and industrial capabilities to a nervous West in a time of unprecedented paranoia and nuclear risk. With these satellites, US military planners were able to understand and assess the real military threat posed by the Soviet Union. They used information provided by spy satellites to help avert potential military confrontations on numerous occasions. Conversely, the Soviet Union's spy satellites were able to observe the United States and its allies, with similar results. It is nearly impossible to move an army and hide it from multiple eyes in the sky. Satellite information is critical to all aspects of US intelligence and military planning. Spy satellites are used to monitor compliance with international arms treaties and to assess the military activities of countries such as China, Russia, Iran, and North Korea. Figure 1.2 shows the capability of modem unclassified space-based imaging. The capability of the classified systems is presumed to be significantly better, providing much more detail. Losing these satellites would place global militaries on high alert and have them operating, literally, in the blind. Our military would suddenly become vulnerable in other areas as well. GPS, a network of 24-32 satellites in medium-Earth orbit, was developed to provide precise position information to the military, and it is now in common use by individuals and industry. The network, which became fully operational in 1993, allows our armed forces to know their exact locations anywhere in the world. It is used to guide bombs to their targets with unprecedented accuracy, requiring that only one bomb be used to destroy a target that would have previously required perhaps hundreds of bombs to destroy in the pre-GPS world (which, incidentally, has resulted in us reducing our stockpile of non-GPS-guided munitions dramatically). It allows soldiers to navigate in the dark or in adverse weather or sandstorms. Without GPS, our military advantage over potential adversaries would be dramatically reduced or eliminated.

#### 6) The aff’s scenario is about the Kessler syndrome in the context of states so they don’t solve those either

#### 7) No debris cascades, but even a worst case is confined to low LEO with no impact

Daniel Von Fange 17, Web Application Engineer, Founder and Owner of LeanCoder, Full Stack, Polyglot Web Developer, “Kessler Syndrome is Over Hyped”, 5/21/2017, http://braino.org/essays/kessler\_syndrome\_is\_over\_hyped/

Kessler Syndrome is overhyped. A chorus of online commenters great any news of upcoming low earth orbit satellites with worry that humanity will to lose access to space. I now think they are wrong.

What is Kessler Syndrome?

Here’s the popular view on Kessler Syndrome. Every once in a while, a piece of junk in space hits a satellite. This single impact destroys the satellite, and breaks off several thousand additional pieces. These new pieces now fly around space looking for other satellites to hit, and so exponentially multiply themselves over time, like a nuclear reaction, until a sphere of man-made debris surrounds the earth, and humanity no longer has access to space nor the benefits of satellites.

It is a dark picture.

Is Kessler Syndrome likely to happen?

I had to stop everything and spend an afternoon doing back-of-the-napkin math to know how big the threat is. To estimate, we need to know where the stuff in space is, how much mass is there, and how long it would take to deorbit.

The orbital area around earth can be broken down into four regions.

Low LEO - Up to about 400km. Things that orbit here burn up in the earth’s atmosphere quickly - between a few months to two years. The space station operates at the high end of this range. It loses about a kilometer of altitude a month and if not pushed higher every few months, would soon burn up. For all practical purposes, Low LEO doesn’t matter for Kessler Syndrome. If Low LEO was ever full of space junk, we’d just wait a year and a half, and the problem would be over.

High LEO - 400km to 2000km. This where most heavy satellites and most space junk orbits. The air is thin enough here that satellites only go down slowly, and they have a much farther distance to fall. It can take 50 years for stuff here to get down. This is where Kessler Syndrome could be an issue.

Mid Orbit - GPS satellites and other navigation satellites travel here in lonely, long lives. The volume of space is so huge, and the number of satellites so few, that we don’t need to worry about Kessler here.

GEO - If you put a satellite far enough out from earth, the speed that the satellite travels around the earth will match the speed of the surface of the earth rotating under it. From the ground, the satellite will appear to hang motionless. Usually the geostationary orbit is used by big weather satellites and big TV broadcasting satellites. (This apparent motionlessness is why satellite TV dishes can be mounted pointing in a fixed direction. You can find approximate south just by looking around at the dishes in your northern hemisphere neighborhood.) For Kessler purposes, GEO orbit is roughly a ring 384,400 km around. However, all the satellites here are moving the same direction at the same speed - debris doesn’t get free velocity from the speed of the satellites. Also, it’s quite expensive to get a satellite here, and so there aren’t many, only about one satellite per 1000km of the ring. Kessler is not a problem here.

**8) Space debris is hype---there are thousands of satellites and only 15 debris collisions ever**

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

There are over a half million pieces of human-made material in orbit around our planet. Some are the size of school buses, some the size of BB gun pellets. They all had a function at some point, but now most are simply space debris littered from 100 to 22,000 miles above the Earth. Yet, all behave perfectly according to the laws of physics. Many in the space community have called the collision hazard caused by space debris a crisis.

Popular culture has embraced the risks of collisions in space in films like Gravity. Some participants have dramatized the issue by producing graphics of Earth and its satellites, which make our planet look like a fuzzy marble, almost obscured by a dense cloud of white pellets meant to conceptualize space congestion.

Unfortunately, for the sake of a good visual, satellites are depicted as if they were hundreds of miles wide, like the state of Pennsylvania (for the record, there are no space objects the size of Pennsylvania in orbit). Unfortunately, this is the rule, not the exception, and almost all of these articles, movies, graphics, and simulations are **exaggerated and misleading**. Space debris and collision risk is real, but it **certainly** is **not a crisis.**

#### 9) It takes centuries and adaptation solves

Ted Muelhaupt 19, Associate Principal Director of the Systems Analysis and Simulation Subdivision (SASS) and Manager of the Center for Orbital and Reentry Debris Studies at The Aerospace Corporation, M.S., B.S. Aerospace and Aeronautical Engineering & Mechanics, University of Minnesota - Twin Cities, Senior Member of the American Institute of Aeronautics and Astronautics, “How Quickly Would It Take For the Kessler Syndrome To Destroy All The Satellites In LEO? And Could You See This Happening From Earth?”, Quora, 2/28/2019, https://www.quora.com/How-quickly-would-it-take-for-the-Kessler-Syndrome-to-destroy-all-the-satellites-in-LEO-And-could-you-see-this-happening-from-Earth

The dynamics of the Kessler Syndrome are real, and most people studying it agree on the concept: if there is sufficient density of objects and mass, a chain reaction of debris breaking up objects and creating more debris can occur. But the timescale of this process takes decades and centuries. There are many assumptions that go into these models. Though there is still argument about this, many people in the field think that the process is already underway in low earth orbit. But others, including myself, think we can stop it if we take action. This is a slow motion disaster that we can prevent.

But in spite of hype to the contrary, we will never “lose access to space”. Certain missions may become impractical or too expensive, and we may decide that some orbits are too risky for humans. Even that depends on the tolerance for the risk. But robots don’t have mothers, and if we feel it is worthwhile we will take the risk and fly the satellites where we need to.

To the specifics of the question, it will take many decades. It will not destroy all satellites in LEO. You won’t be able to see it from the ground unless you were extraordinarily lucky, and you happened to see a flash from a collision in the instant you were looking, with just the right lighting.

#### 10) No terminal impacts to anything their card mentions

#### 11) No impact to debris – it hits stations all the time.

Cain ’15 (Fraser; 12/23/15; writer for Universe Today; “How Do Astronauts Avoid Debris”; http://www.universetoday.com/121067/how-do-astronauts-avoid-debris)

So, just how do we keep our space stations, ships and astronauts from being riddled with holes from all of the space junk in orbit around Earth? We revel in the terror grab bag of all the magical ways to get snuffed in space. Almost as much as we celebrate the giant brass backbones of the people who travel there. We’ve already talked about all the scary ways that astronauts can die in space. My personal recurring “Hail Mary full of grace, please don’t let me die in space” nightmare is orbital debris. We’re talking about a vast collection of spent rockets, dead satellites, flotsam, jetsam, lagan and derelict. It’s not a short list. NASA figures there are **21,000 bits of junk** bigger than 10 cm, **500,000 particles** between 1 and 10 cm, and more than **100 million** smaller than 1 cm. Sound familiar, humans? This is our high tech, sci fi great Pacific garbage patch. Sure, a tiny rivet or piece of scrap foil doesn’t sound very dangerous, but consider the fact that astronauts are orbiting the Earth at a velocity of about 28,000 km/h. And the Tang packets, uneaten dehydrated ice cream, and astronaut poops are also traveling at 28,000 km/h. Then think about what happens when they collide. Yikes… or yuck. Here’s the International Space Station’s solar array. See that tiny hole? Embiggen and clarinosticate! That’s a tiny puncture hole made in the array by a piece of orbital crap. The whole station is **pummeled by tiny pieces of space program junk drawer contents**. Back when the Space Shuttle was flying, NASA had to **constantly replace their windows because of the damage they were experiencing** from the orbital equivalent of Dennis the Menace hurling paint chips, fingernail clippings, and frozen scabs.

**12) Time frame – Kessler effect 200 years away**

**Stubbe 17** [(Peter, PhD in law @ Johann Wolfgang Goethe University Frankfurt) “State Accountability for Space Debris: A Legal Study of Responsibility for Polluting the Space Environment and Liability for Damage Caused by Space Debris,” Koninklijke Brill Publishing, ISBN 978-90-04-31407-8, p. 27-31] TDI

The prediction of possible scenarios of the future evolution of the debris p o p ulation involves many uncertainties. Long-term forecasting means the prediction of the evolution of the future debris environment in time periods of decades or even centuries. Predictions are based on models84 that work with certain assumptions, and altering these parameters significantly influences the outcomes of the predictions. Assumptions on the future space traffic and on the initial object environment are particularly critical to the results of modeling efforts.85 A well-known pattern for the evolution of the debris population is the so-called Kessler effect’, which assumes that there is a certain collision probability among space objects because many satellites operate in similar orbital regions. These collisions create fragments, and thus additional objects in the respective orbits, which in turn enhances the risk of further collisions. Consequently, the num ber of objects and collisions increases exponentially and eventually results in the formation of a self-sustaining debris belt aroundthe Earth. While it has long been assumed that such a process of collisional cascading is likely to occur only in a very long-term perspective (meaning a time 1 n of several hundred years),87 a consensus has evolved in recent years that an uncontrolled growth of the debris population in certain altitudes could become reality much sooner.88 In fact, a recent cooperative study undertaken by various space agencies in the scope of i a d c shows that the current l e o debris population is unstable, even if current mitigation measures are applied. The study concludes:

Even with a 90% implementation of the commonly-adopted mitigation measures [...] the l e o debris population is expected to increase by an average of 30% in the next 200 years. The population growth is primarily driven by catastrophic collisions between 700 and 1000 km altitudes and such collisions are likely to occur every 5 to 9 years.89

#### 13) Use or lose is wrong – It’d be irrational AND never be contemplated by any state.

Kroenig 18 Matthew Kroenig, Associate Professor in the Department of Government and the Edmund A. Walsh School of Foreign Service at Georgetown, The Logic of American Nuclear Strategy: Why Strategic Superiority Matters, Oxford UPress, pp. 137-142

The second, and more common, argument as to why nuclear superiority might be destabilizing is because the state in the position of nuclear inferiority (in this case, America’s adversaries) may feel “use ’em or lose ’em” (UELE) pressures, but this argument also withers under interrogation.26

According to strategic stability theorists, a US nuclear advantage increases the danger of nuclear war because the inferior opponent may fear that its nuclear arsenal is vulnerable to a first strike. Rather, than wait for the adversary (in this case the United States) to move first and wipe out, or seriously blunt, its strategic forces, the argument goes, the inferior state may decide to intentionally launch a nuclear war early in a crisis in order to avoid suffering a disarming first strike. This is the logic most often invoked by strategic stability theorists when they claim that US nuclear advantages are destabilizing. This is also the precise problem identified and inspired by Wohlstetter’s basing studies.

Use ’em or lose ’em enjoys a certain superficial plausibility, but, upon closer inspection, there are two fundamental reasons why the logic simply does not hold up. First, it ignores the fact that the superior state retains a healthy ability to retaliate. So, even if the inferior state is worried about having its nuclear weapons eliminated in a first strike, the decision to launch its nuclear weapons first as a coping mechanism would be a decision to intentionally launch a nuclear war against a state with at least a secure, second-strike capability. This means that even if the inferior state launches its nuclear weapons first, it will be virtually guaranteed to suffer devastating nuclear retaliation. Moreover, given that it is in a situation of extreme inferiority (so extreme that it might even be vulnerable to a preemptive nuclear strike), this would mean intentionally launching a devastating nuclear war that will likely turn out much worse for itself then for its opponent. It would simply be irrational for a state to intentionally launch a nuclear war against a state with an assured retaliatory capability.

Let us consider a concrete example. The United States maintains nuclear superiority over China, as we have seen in previous chapters. Strategic stability theorists want us to believe that if the United States takes additional steps to further enhance its superiority, then China would face even greater temptations to launch a nuclear first strike against the US homeland in the event of a serious crisis. In other words, strategic stability theorists hold that China would be so worried about losing a devastating nuclear war against United States that it would intentionally choose to start a devastating nuclear war against the United States. The argument does not make sense.

### Advantage 2 – Cap

#### 1) Plan doesn’t get rid of global institutions like the IMF and World Bank and has no way to get rid of the neoliberalism engrained in society – absent a link between “tax some companies and people a bit more” and “global collapse of capitalism” you should vote neg on presumption since they have no impact outside of removing capitalism entirely.

#### 2) They don’t solve their own impacts – cap exists outside of space and they don’t solve all of cap and so can’t solve its impacts on earth.

#### 3) No extinction—the aff says private space colonization would happen before neolib wrecks the environment that much—and their card provides no justification for why neolib causes extinction.

#### 4) Replicating imperialism is just a metaphor – there aren’t people in space and the aff doesn’t solves colonialism – it’s just a horrible arg that doesn’t substantiate a terminal and is an independent reason to reject the team for homogenizing and trivializing real world violence

#### 5) They don’t solve environment – it’s incorrect assume synergistic effects of tech – also no impact

Bailey 18 [Ronald Bailey, shortlisted by the editors of Nature Biotechnology as one of the personalities who have made the "most significant contributions" to biotechnology. From 1987 to 1990, Bailey was a staff writer for Forbes magazine, covering economic, scientific and business topics. His articles and reviews have appeared in The New York Times, The Wall Street Journal, The Washington Post, Commentary, The Public Interest, Smithsonian, and many other publications. Prior to joining Reason in 1997, Bailey produced several weekly national public television series including Think Tank and TechnoPolitics, as well as several documentaries for PBS television and ABC News. In 1993, he was the Warren T. Brookes Fellow in Environmental Journalism at the Competitive Enterprise Institute. Climate Change Problems Will Be Solved Through Economic Growth. March 12, 2018. https://reason.com/blog/2018/03/12/climate-change-problems-will-be-solved-t]

In an essay for The Breakthrough Journal, Pinker notes that such optimism "is commonly dismissed as the 'faith that technology will save us.' In fact, it is a skepticism that the status quo will doom us—that knowledge and behavior will remain frozen in their current state for perpetuity. Indeed, a naive faith in stasis has repeatedly led to prophecies of environmental doomsdays that never happened." In his new book, Enlightenment Now, Pinker points out that "as the world gets richer and more tech-savvy, it dematerializes, decarbonizes, and densifies, sparing land and species." Economic growth and technological progress are the solutions not only to climate change but to most of the problems that bedevil humanity.

Boisvert, meanwhile, tackles and rebuts the apocalyptic prophecies made by eco-pessimists like Wallace-Wells, specifically with regard to food production and availabilty, water supplies, heat waves, and rising seas.

"No, this isn't a denialist screed," Boisvert writes. "Human greenhouse emissions will warm the planet, raise the seas and derange the weather, and the resulting heat, flood and drought will be cataclysmic. Cataclysmic—but not apocalyptic. While the climate upheaval will be large, the consequences for human well-being will be small. Looked at in the broader context of economic development, climate change will barely slow our progress in the effort to raise living standards."

Boisvert proceeds to show how a series of technologies—drought-resistant crops, cheap desalination, widespread adoption of air-conditioning, modern construction techniques—will ameliorate and overcome the problems caused by rising temperatures. He is entirely correct when he notes, "The most inexorable feature of climate-change modeling isn't the advance of the sea but the steady economic growth that will make life better despite global warming."

#### 6) Warming disasters are hype – no causation

[Singer](https://www.heartland.org/sites/default/files/12-04-15_why_scientists_disagree.pdf) et al 15. (Dr. Siegfried Fred Singer is an Austrian-born American physicist and emeritus professor of environmental science at the University of Virginia. Dr. Robert Merlin Carter was an English palaeontologist, stratigrapher and marine geologist. Dr. Craig D. Idso is the founder, former president and current chairman of the board of the Center for the Study of Carbon Dioxide and Global Change. Why Scientists Disagree About Global Warming. December 4, 2015. https://www.heartland.org/sites/default/files/12-04-15\_why\_scientists\_disagree.pdf)

IPCC does not object when persons, such as former U.S. Vice President Al Gore, cite its reports in support of claims that global warming is leading to more, or more intense, wildfires, rainfall, storms, hurricanes, and other extreme weather events. IPCC’s latest Summary for Policymakers is filled with vivid warnings of this kind, even though in 2012 an IPCC report acknowledged that a relationship between global warming and wildfires, rainfall, storms, hurricanes, and other extreme weather events has not been demonstrated (IPCC, 2012). In no case has a convincing relationship been established between warming over the past 100 years and increases in any of these extreme weather events (Alexander et al., 2006; Khandekar, 2013; Pielke, Jr., 2014). Instead, the number and intensity of extreme events vary, and they wax and wane from one place to another and often in parallel with natural decadal or multidecadal climate oscillations. Basic meteorological science suggests a warmer world would experience fewer storms and weather extremes, as indeed has been the case in recent years. Figure 15 summarizes key facts on this subject presented in Chapter 7 of Climate Change Reconsidered-II: Physical Science. Figure 15 Key Facts about Extreme Weather Events # Air temperature variability decreases as mean air temperature rises, on all time scales. # Therefore the claim that global warming will lead to more extremes of climate and weather, including of temperature itself, seems theoretically unsound; the claim is also unsupported by empirical evidence. # Although specific regions have experienced significant changes in the intensity or number of extreme events over the twentieth century, for the globe as a whole no relationship exists between such events and global warming over the past 100 years. # Observations from across the planet demonstrate that droughts have not become more extreme or erratic in response to global warming. In most cases, the worst droughts in recorded meteorological history were much milder than droughts that occurred periodically during much colder times. # There is little to no evidence that precipitation will become more variable and intense in a warming world; indeed some observations show just the opposite. There has been no significant increase in either the frequency or intensity of stormy weather in the modern era. # Despite the supposedly “unprecedented” warming of the twentieth century, there has been no increase in the intensity or frequency of tropical cyclones globally or in any of the specific ocean basins. # The commonly held perception that twentieth century warming was accompanied by an increase in extreme weather events is a misconception fostered by excessive media attention and has no basis in facts.

#### 7) Regulations destroy spce col – disruptions kill that potential

Thiessen ‘20 – writes a twice-weekly column for The Post on foreign and domestic policy. He is a fellow at the American Enterprise Institute, and the former chief speechwriter for President George W. Bush. (Marc A., "SpaceX’s success is one small step for man, one giant leap for capitalism," Washington Post, 6-1-2020, https://www.washingtonpost.com/opinions/2020/06/01/spacexs-success-is-one-small-step-man-one-giant-leap-capitalism/, Accessed 1-6-2021, )

It was one small step for man, one giant leap for capitalism. Only three countries have ever launched human beings into orbit. This past weekend, SpaceX became the first private company ever to do so, when it sent its Crew Dragon capsule into space aboard its Falcon 9 rocket and docked with the International Space Station. This was accomplished by a company Elon Musk started in 2002 in a California strip mall warehouse with just a dozen employees and a mariachi band. At a time when our nation is debating the merits of socialism, SpaceX has given us an incredible testament to the power of American free enterprise. While the left is advocating unprecedented government intervention in almost every sector of the U.S. economy, from health care to energy, today Americans are celebrating the successful privatization of space travel. If you want to see the difference between what government and private enterprise can do, consider: It took a private company to give us the first space vehicle with touch-screen controls instead of antiquated knobs and buttons. It took a private company to give us a capsule that can fly entirely autonomously from launch to landing — including docking — without any participation by its human crew. It also took a private company to invent a reusable rocket that can not only take off but land as well. When the Apollo 11 crew reached the moon on July 20, 1969, Neil Armstrong declared “the Eagle has landed.” On Saturday, SpaceX was able to declare that the Falcon had landed when its rocket settled down on a barge in the Atlantic Ocean — ready to be used again. That last development will save the taxpayers incredible amounts of money. The cost to NASA for launching a man into space on the space shuttle orbiter was $170 million per seat, compared with just $60 million to $67 million on the Dragon capsule. The cost for the space shuttle to send a kilogram of cargo into to space was $54,500; with the Falcon rocket, the cost is just $2,720 — a decrease of 95 percent. And while the space shuttle cost $27.4 billion to develop, the Crew Dragon was designed and built for just $1.7 billion — making it the lowest-cost spacecraft developed in six decades. SpaceX did it in six years — far faster than the time it took to develop the space shuttle. The private sector does it better, cheaper, faster and more efficiently than government. Why? Competition. Today, SpaceX has to compete with a constellation of private companies — including legacy aerospace firms such as Orbital ATK and United Launch Alliance and innovative start-ups such as Blue Origin (which is designing a Mars lander and whose owner, Jeff Bezos, also owns The Post) and Virgin Orbit (which is developing rockets than can launch satellites into space from the underside of a 747, avoiding the kinds of weather that delayed the Dragon launch). In the race to put the first privately launched man into orbit, upstart SpaceX had to beat aerospace behemoth Boeing and its Starliner capsule to the punch. It did so — for more than $1 billion less than its competitor. That spirit of competition and innovation will revolutionize space travel in the years ahead. Indeed, Musk has his sights set far beyond Earth orbit. Already, SpaceX is working on a much larger version of the Falcon 9 reusable rocket called Super Heavy that will carry a deep-space capsule named Starship capable of carrying up to 100 people to the moon and eventually to Mars. Musk’s goal — the reason he founded SpaceX — is to colonize Mars and make humanity a multiplanetary species. He has set a goal of founding a million-person city on Mars by 2050 complete with iron foundries and pizza joints. Can it be done? Who knows. But this much is certain: Private-sector innovation is opening the door to a new era of space exploration. Wouldn’t it be ironic if, just as capitalism is allowing us to explore the farthest reaches of our solar system, Americans decided to embrace socialism back here on Earth?

#### 8) Happens by 2050s---solves every impact BUT degrowth disrupts progress

Drake '16 – a science journalist and contributing writer at National Geographic. She earned an A.B. in biology, psychology, and dance at Cornell University, worked in a clinical genetics lab at The Johns Hopkins University School of Medicine, then returned to Cornell for her Ph.D. in genetics and development. (Bynadia, "Elon Musk: A Million Humans Could Live on Mars By the 2060s," Science, 9-27-2016, https://www.nationalgeographic.com/science/article/elon-musk-spacex-exploring-mars-planets-space-science, Accessed 6-10-2021, )

In perhaps the most eagerly anticipated aerospace announcement of the year, SpaceX founder Elon Musk has revealed his grand plan for establishing a human settlement on Mars. In short, Musk thinks it’s possible to begin shuttling thousands of people between Earth and our smaller, redder neighbor sometime within the next decade or so. And not too long after that—perhaps 40 or a hundred years later, Mars could be home to a self-sustaining colony of a million people. “This is not about everyone moving to Mars, this is about becoming multiplanetary,” he said on September 27 at the International Astronautical Congress in Guadalajara, Mexico. “This is really about minimizing existential risk and having a tremendous sense of adventure.” Musk’s timeline sounds ambitious, and that's something he readily acknowledges. “I think the technical outline of the plan is about right. He also didn’t pretend that it was going to be easy and that they were going to do it in ten years,” says Bobby Braun, NASA’s former chief technologist who’s now at Georgia Tech University. “I mean, who’s to say what’s possible in a hundred years?” And for those wondering whether we should go at all, the reason for Musk making Mars an imperative is simple. “The future of humanity is fundamentally going to bifurcate along one of two directions: Either we’re going to become a multiplanet species and a spacefaring civilization, or we’re going be stuck on one planet until some eventual extinction event,” Musk told Ron Howard during an interview for National Geographic Channel’s MARS, a global event series that premieres worldwide on November 14. “For me to be excited and inspired about the future, it’s got to be the first option. It’s got to be: We’re going to be a spacefaring civilization.” Mars Fleet Though he admitted his exact timeline is fuzzy, Musk thinks it’s possible humans could begin flying to Mars by the mid-2020s. And he thinks the plan for getting there will go something like this: It starts with a really big rocket, something at least 200 feet tall when fully assembled. In a simulation of what SpaceX calls its Interplanetary Transport System, a spacecraft loaded with astronauts will launch on top of a 39-foot-wide booster that produces a whopping 28 million pounds of thrust. Using 42 Raptor engines, the booster will accelerate the assemblage to 5,374 miles an hour. Overall, the whole thing is 3.5 times more powerful than NASA’s Saturn V, the biggest rocket built to date, which carried the Apollo missions to the moon. Perhaps not coincidentally, the SpaceX rocket would launch from the same pad, 39A, at Kennedy Space Center in Cape Canaveral, Florida. The rocket would deliver the crew capsule to orbit around Earth, then the booster would steer itself toward a soft landing back at the launch pad, a feat that SpaceX rocket boosters have been doing for almost a year now. Next, the booster would pick up a fuel tanker and carry that into orbit, where it would fuel the spaceship for its journey to Mars. Once en route, that spaceship would deploy solar panels to harvest energy from the sun and conserve valuable propellant for what promises to be an exciting landing on the Red Planet. As Musk envisions it, fleets of these crew-carrying capsules will remain in Earth orbit until a favorable planetary alignment brings the two planets close together—something that happens every 26 months. “We’d ultimately have upward of a thousand or more spaceships waiting in orbit. And so the Mars colonial fleet would depart en masse,” Musk says. The key to his plan is reusing the various spaceships as much as possible. “I just don’t think there’s any way to have a self-sustaining Mars base without reusability. I think this is really fundamental,” Musk says. “If wooden sailing ships in the old days were not reusable, I don’t think the United States would exist.” Musk anticipates being able to use each rocket booster a thousand times, each tanker a hundred times, and each spaceship 12 times. At the beginning, he imagines that maybe a hundred humans would be hitching a ride on each ship, with that number gradually increasing to more than 200. By his calculations, then, putting a million people on Mars could take anywhere from 40 to a hundred years after the first ship launches. And, no, it would not necessarily be a one-way trip: “I think it’s very important to give people the option of returning,” Musk says. Colonizing Mars After landing a few cargo-carrying spacecraft without people on Mars, starting with the Red Dragon capsule in 2018, Musk says the human phase of colonization could begin. For sure, landing a heavy craft on a planet with a thin atmosphere will be difficult. It was tough enough to gently lower NASA’s Curiosity rover to the surface, and at 2,000 pounds, that payload weighed just a fraction of Musk’s proposed vessels. For now, Musk plans to continue developing supersonic retrorockets that can gradually and gently lower a much heavier spacecraft to the Martian surface, using his reusable Falcon 9 boosters as a model. And that’s not all these spacecraft will need: Hurtling through the Martian atmosphere at supersonic speeds will test even the most heat-tolerant materials on Earth, so it’s no small task to design a spacecraft that can withstand a heated entry and propulsive landing—and then be refueled and sent back to Earth so it can start over again. The first journeys would primarily serve the purpose of delivering supplies and establishing a propellant depot on the Martian surface, a fuel reservoir that could be tapped into for return trips to Earth. After that depot is set up and cargo delivered to the surface, the fun can (sort of) begin. Early human settlers will need to be good at digging beneath the surface and dredging up buried ice, which will supply precious water and be used to make the cryo-methane propellant that will power the whole enterprise. As such, the earliest interplanetary spaceships would probably stay on Mars, and they would be carrying mostly cargo, fuel, and a small crew: “builders and fixers” who are “the hearty explorer type,” Musk said to Howard. “Are you prepared to die? If that’s OK, then you’re a candidate for going.” While there will undoubtedly be intense competition and lots of fanfare over the first few seats on a Mars-bound mission, Musk worries that too much emphasis will be placed on those early bootprints. “In the sort of grander historical context, what really matters is being able to send a large number of people, like tens of thousands if not hundreds of thousands of people, and ultimately millions of tons of cargo,” he says.

#### 9) Capitalism is inevitable

**Kaletsky ’10**

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The world did not end. Despite all the forebodings of disaster in the 2007– 09 financial crisis, the first decade of the twenty-first century passed rather uneventfully into the second. The riots, soup kitchens, and bankruptcies **predicted by many** of the world’s most respected economists **did not materialize**— and no one any longer **expects the global capitalist system to collapse**, whatever that emotive word might mean. Yet the capitalist system’s survival does not mean that the precrisis faith in the wisdom of financial markets and the efficiency of free enterprise will ever again be what it was before the bankruptcy of Lehman Brothers on September 15, 2008. A return to decent economic growth and normal financial conditions is likely by the middle of 2010, but will this imply a return to business as usual for politicians, economists, and financiers? Although **globalization will continue** and many parts of the world will gradually regain their prosperity of the precrisis period, the traumatic effects of 2007– 09 will not be quickly forgotten. And the economic costs will linger for decades in the debts squeezing taxpayers and government budgets, the disrupted lives of the jobless, and the vanished dreams of homeowners and investors around the world. For what collapsed on September 15, 2008, was not just a bank or a financial system. What fell apart that day was an entire political philosophy and economic system, a way of thinking about and living in the world. The question now is what will replace the global capitalism that crumbled in the autumn of 2008. The central argument of this book is that global capitalism will be replaced by nothing other than global capitalism. The traumatic events of 2007– 09 will neither destroy nor diminish the fundamental human urges that have always powered the capitalist system— ambition, initiative, individualism, the competitive spirit. These natural human qualities will instead be redirected and reenergized **to create a new version of capitalism** that will ultimately be even **more successful and productive** than the system it replaced. To explain this process of renewal, and identify some of the most important features of the reinvigorated capitalist system, is the ambition of this book. This transformation will take many years to complete, but some of its consequences can already be discerned. With the benefit of even a year’s hindsight, it is clear that **these consequences will be different from the nihilistic predictions** from both ends of the political spectrum at the height of the crisis. On the Left, anticapitalist ideologues seemed honestly to believe that a few weeks of financial chaos could bring about the disintegration of a politico-economic system that had **survived two hundred years of revolutions**, depressions, and world wars. On the Right, free-market zealots insisted that private enterprise would be destroyed by government interventions that were clearly necessary to save the system— and many continue to believe that the crisis could have been resolved much better if governments had simply allowed financial institutions to collapse. A balanced reassessment of the crisis must challenge both left-wing hysteria and right-wing hubris. Rather than blaming the meltdown of the global financial system on greedy bankers, incompetent regulators, gullible homeowners, or foolish Chinese bureaucrats, this book puts what happened into historical and ideological perspective. It reinterprets the crisis in the context of the economic reforms and geopolitical upheavals that have repeatedly transformed the nature of capitalism since the late eighteenth century, most recently in the Thatcher-Reagan revolution of 1979– 89. The central argument is that capitalism has **never been a static system** that follows a fixed set of rules, characterized by a permanent division of responsibilities between private enterprise and governments. Contrary to the teachings of modern economic theory, **no immutable laws govern** the behavior of **a capitalist economy**. Instead, capitalism is an **adaptive social system that** mutates and **evolves** in response to a changing environment. **When capitalism is** seriously threatened by a systemic crisis, a new version emerges that is better suited to **the changing environment** and replaces the previously dominant form. Once we recognize that capitalism is not a static set of institutions, but an evolutionary system that reinvents and reinvigorates itself through crises, we can see the events of 2007– 09 in another light: as the catalyst for the fourth systemic transformation of capitalism, comparable to the transformations triggered by the crises of the 1970s, the crises of the 1930s, and the Napoleonic Wars of 1803– 15. Hence the title of this book.