# 1AR

#### No I/L – Xi foreign policy is insulated from hardliners

Cabestan 19, Jean-Pierre. "Political changes in China since the 19th CCP Congress: Xi Jinping is not weaker but more contested." East Asia 36.1 (2019): 1-21. (Professor and Head of the Department of Government and International Studies at Hong Kong Baptist University)//Elmer

The Summer Offensive Against Xi In the summer of 2018, particularly in July–August, criticism of Xi Jinping started to emerge and mushroom. It came from various circles, to the point that, as just indicated, the CCP propaganda apparatus had to tone down Xi’s personality cult. Two types of attacks have been identified: (1) against Xi’s reluctance to move economic reforms forward and his uncompromising posture vis-à-vis the Trump administration; (2) against his political conservatism and his opposition to any kind of political reform or opening. The former type of criticism originated from CCP and governmental circles, particularly leaders close to Li Keqiang; the latter from intellectuals and scholars frustrated by Xi’s rule and his intention to perpetuate his reign longer than his predecessors. There are of course connections and overlaps between these two streams of attacks. Nonetheless, it is doubtful that Xi’s opponents within the CCP leadership would venture raising their voice against Xi’s political status: their criticism focused on policies and strategies. As far as the economy is concerned, reformists concentrated their objections on two fronts: the place of private businesses in the economy and the need to expand market mechanisms and submit SOEs to them. On the US, they were in favor of a more flexible approach to bilateral trade negotiations and felt that Xi’s publicized ambition for China to overtake the world first economy and to become a leader in all high technologies of the future, promoted in the “Made in China 2025 Plan” issued in 2015, was a risky strategy. They also thought that Xi had misjudged Trump in predicting that trade tensions would not escalate because both countries had too much to lose. The first consequence of these critics has been the Chinese government’s decision made in June 2018 to stop mentioning “Made in China 2025.” Then, instructions have been given to official media to avoid propagating it as a way of calming down the West in general and the US in particular. A month later, media were asked not to qualify China–US commercial frictions as a “trade war” [32]. The second consequence has been the increasing public criticisms of exaggerated self-confidence about the state of the Chinese economy. In view of the current slowdown and US trade sanctions, government officials and analysts have multiplied messages of caution. And very quickly the discussion expanded to university campuses. For example, at Tsinghua University, a group of professors namely attacked their colleague Hu Angang for the economic triumphalism that he had manifested, a public sentiment that in their eyes was not only wrong, in view of the Chinese economy’s real situation, but also had alarmed the US and others. They went as far as asking Hu’s expulsion from Tsinghua [41]. Another academic, Zi Zhongjun, an international politics expert, put the blame of the current impasse in China–US negotiations on the Xi Administration’s inability or unwillingness to reform, partly caused by the “monopoly over resources” that the Party wants to keep [53]. The third consequence has been the emergence of open divisions in the Chinese leadership. At the seaside resort of Beidaihe (Hebei) where CCP leaders held their annual conclave in late July–early August, it appeared that not only part of the leadership but some elder leaders as Jiang Zemin, Hu Jintao, and Zhu Rongji made their criticism known [33]. Some reports even indicated that in July, Wang Huning, responsible of Xi’s personality cult, and Liu He, for having failed to negotiate a compromise with the US, had been sidelined [19]. Actually, it seems that Liu has taken the blame for having disagreed with Xi in pushing for a deal with the Trump Administration while Xi wanted to “hold the game up” to quote White House chief economist Larry Kudlow, asking Liu instead to concentrate on SOEs’ reform [19]. Trade tensions with the US as well as the economic slowdown have also fed other fault lines, for instance between the PBC and the Finance Ministry, a senior official of the former deploring the effectiveness of the latter’s fiscal policy and its lack of transparency [19]. In this new context, provincial leaders, including most of Xi’s supporters, remained silent. Xi’s absence from China from 19 to 30 July August contributed also to both paralyzing and dividing the Chinese government. In addition to these divisions, some unusual intellectual dissent emerged openly. The most prominent and devastating criticism of Xi came from Xu Zhangrun, a Tsinghua University law professor then residing in Japan. In a long article titled “Our Hopes and Fears” published in late July, he denounced Xi’s restoration of a Mao-styled leadership model which had abandoned Deng Xiaoping’s reforms and in particular three of his crucial principles: collective leadership, term limit, and no personality cult. Xu went further in accusing Xi of having restored “totalitarian politics” and in asking him to rehabilitate June 4th victims [49]. The Limits of the Summer Offensive Limits to this offensive have from the very beginning been obvious. To start with, Xi had never been really threatened by these criticisms: he did not postpone or cancel his July 2018 10-day journey to the Middle East and Africa. The day before he left, his close ally Li Zhanshu went further in the adulation of Xi, calling him the “eternal core” of Party leadership [19]. And when he came back from overseas, Xi very quickly took back the initiative, convening high-level meetings not only of the Politburo on 31 July 2018 but later with military leaders and propaganda officials among others to reassert his power and leadership. The 31 July Politburo meeting emphasized the Party’s role in the economy and the importance of the state sector. Rather than deleveraging SOEs and local government’s debt, the CCP leadership then decided to use fiscal and monetary means to stimulate the economy and reverse or at least reduce the slowdown [56]. Later in August, Xi summoned the top brass of the PLA to remind them that “the key to our army’s construction and development is Party leadership and Party construction.” Around the same time, the propaganda apparatus was mobilized to develop with more vigor the study of Xi’s thought both in the Party and the society [20]. The deepening of the Sino-US trade war as well as the growing criticism among other developed countries, particularly in the European Union, of China’s own economic protectionism as well as the measures these countries have taken to keep their technological edge (as a better screening of Chinese investments) have also convinced Xi to revive the “self-reliance” discourse, an ideology that Mao Zedong privileged at the time the country was poor, closed, and isolated. In his eyes, the trade disputes with the West are here to stay and China should follow its own path to development without relying too much on the outside world. Simultaneously, Xi has also kept promoting and pampering the state sector, confirming his intention to put into place a “market economy” which remains far from an even playing field for every economic actor, particularly foreign enterprises. In other words, Xi has been able to remain strong and stick to his guns.

#### Empirically denied – Xi hasn’t lived up to his economic promises and no lash out occurred.

**Buckley and Bradsher 17** (Chris Buckley and Keith Bradsher, 3-4-2017, "**Xi** Jinping’s **Failed Promises** Dim Hopes for Economic Change in 2nd Term (Published 2017)," No Publication, <https://www.nytimes.com/2017/03/04/world/asia/china-xi-jinping-economic-reform.html>) // Lex CH

BEIJING — For years, China’s president, **Xi** Jinping, **has talked** the talk of **economic reform**. In January, he dazzled business executives in Davos, Switzerland, with a defense of international trade. Last month, he urged officials to “seize hold of reform and make it an even bigger priority.” And the annual meeting of China’s legislature, starting Sunday, appears sure to echo that theme.

But as Mr. **Xi** nears the end of his first five-year term as Communist Party leader, his record **has not lived up to the bold statements**, critics say.

# 1AC – China

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### 1AC – Footnote

Counter Solvency Advocates –

XI Lashout DA –

[Neel V. Patel, Neel is a space reporter for MIT Technology Review. 1-21-2021, "China’s surging private space industry is out to challenge the US," MIT Technology Review, <https://www.technologyreview.com/2021/01/21/1016513/china-private-commercial-space-industry-dominance/> accessed 12/14/21] Adam

Space Commercialization DA –

Klein 19, John J. Understanding space strategy: the art of war in space. Routledge, 2019. (a Senior Fellow and Strategist at Falcon Research, Inc. and Adjunct Professor at George Washington University’s Space Policy Institute) *Elmer*

Innovation DA –

Joshua Hampson 1-25-2017 "The Future of Space Commercialization" <https://republicans-science.house.gov/sites/republicans.science.house.gov/files/documents/TheFutureofSpaceCommercializationFinal.pdf> (Security Studies Fellow at the Niskanen Center) *Elmer*

### 1AC – Plan

#### Plan: The Peoples Republic of China ought to prohibit appropriation of space by private entities.

### 1AC – Adv

#### The Advantage is Space War.

#### 1] The US is in the lead now but China’s set to surpass – space becomes a new frontier for war, influence, and property.

**Kharpal 21** [Arjun Kharpal, 5-29-2021, “China once said it couldn’t put a potato in space. Now it’s eyeing Mars,” CNBC, [https://www.cnbc.com/2021/06/30/china-space-goals-ccp-100th-anniversary.html //](https://www.cnbc.com/2021/06/30/china-space-goals-ccp-100th-anniversary.html%20//) JB]

GUANGZHOU, China — In 1957, the Soviet Union launched Sputnik, the first artificial satellite, which sparked a space race with the U.S. China, however, was nowhere to be seen. While the U.S. and the Soviet Union were battling for superiority in this new domain, Mao Zedong, one of the founders of the Chinese Communist Party (**CCP**), reportedly **said**: “**China cannot even put a potato in space**.” Fast forward more than six decades and President [**Xi** Jinping](https://www.cnbc.com/xi-jinping/), China’s current leader, **is seen congratulating** [three **astronauts** who were sent](https://www.cnbc.com/2021/06/17/china-launches-first-astronauts-to-its-self-developed-space-station.html) to the country’s own **space station** earlier this month. Since Mao’s comments, [**China** has **launched satellites**](https://www.cnbc.com/2020/06/23/beidou-china-completes-rival-to-the-us-owned-gps-system.html), sent humans to space and is **now**[**planning to build a base on Mars**](https://www.cnbc.com/2021/06/24/china-plans-to-send-its-first-crewed-mission-to-mars-in-2033.html)**, 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**.” In March, [China highlighted space as a “frontier technology”](https://www.cnbc.com/2021/03/05/china-to-focus-on-frontier-tech-from-chips-to-quantum-computing.html) 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. China’s space program kicked off in the late 1950s but it was only recently that the world’s second-largest economy was able to tout major successes. In June last year, **China** [completed its own global **satellite** navigation system called **Beidou**](https://www.cnbc.com/2020/06/23/beidou-china-completes-rival-to-the-us-owned-gps-system.html), a rival to the U.S. government-owned Global Positioning System (GPS). [Experts said](https://www.cnbc.com/2020/06/22/beidou-china-aims-to-complete-gps-system-that-rivals-us.html) it will **help China’s military systems** stay **online in the event of a conflict**. In December, a Chinese spacecraft returned to Earth [carrying rock samples from the moon](https://www.cnbc.com/2020/12/17/china-brings-moon-rocks-back-to-earth-in-a-first-for-the-country.html), a first for the country. Last month, [China sent a crewed mission](https://www.cnbc.com/2021/06/17/china-launches-first-astronauts-to-its-self-developed-space-station.html) to its self-developed space station which is [still being built](https://www.cnbc.com/2021/04/29/china-launches-key-module-of-space-station-planned-for-2022-.html). It was China’s first time sending humans to space since 2016. Beijing has now turned its sight on Mars. [China hopes to send its first crewed mission to the Red Planet in 2033](https://www.cnbc.com/2021/06/24/china-plans-to-send-its-first-crewed-mission-to-mars-in-2033.html) after landing a [spacecraft there in May](https://www.cnbc.com/2021/05/15/china-completes-historic-mars-spacecraft-landing.html). China has been a lot more aggressive in recent years in **filing for patents** related to space technologies as it **sets up for** some of these **future missions**. Between January 2000 and June 2021, **Chinese entities filed 6,634 patents related to space travel**, including vehicles and equipment, according to data compiled for CNBC by GreyB, a patent research firm. But nearly 90% of those patent requests were submitted in the last five-and-a-half years. Between January 2016 and June 2021, the top three patent requests came from Chinese entities, followed by U.S. planemaker [Boeing](https://www.cnbc.com/quotes/BA). It highlights how rapidly **China** is hoping to **develop the technologies** required for more advanced space flights. **Patents are seen as one way to help define** and control standards for next-generation technologies — [a goal for China in many different sectors](https://www.cnbc.com/2020/04/27/china-standards-2035-explained.html), including telecommunications to **artificial intelligence**. “These patents do not just signify the level of innovation in China related to space, but also a well thought of strategy to protect these innovations to gain economic advantage for its space related tech,” said Vikas Jha, assistant vice president for intellectual property solutions at GreyB. “In the near future, **most** of the **patents** in cosmonautics will be **owned by China** (unless others follow suit), meaning **China** can become a **gatekeeper for the use of space tech for both private players and governments**. This is in line with the **Chinese strategy** of become a superpower not just on Earth, but also in space.” The **U.S. and China are already** battling for **dominance** in areas **from semiconductor development to artificial intelligence**. Space will be another frontier, even as the U.S. is dominating in that area for now. “**The United States** remains **ahead** overall in all areas of space capability, **but China is rapidly closing that lead**,” Scott Pace, director of the Space Policy Institute at The George Washington University’s Elliott School of International Affairs, told CNBC. “The United States has a strong policy for space exploration, a clear direction, and capable allies and partners,” he said. “The challenge for the United States is not so much what China does, but how well and **how quickly the United States implements its own plans**.” But widening **political differences between China and the U.S. can** also **spill** into the space arena. One example is a disagreement last year between the **two nations over** the so-called **Artemis Accords**, an agreement led by NASA that looks to create rules around responsible and fair space exploration. Australia, Canada, Italy, Japan, Luxembourg, the United Arab Emirates, and the U.K all signed up. China didn’t. “The **polarisation of space activity** along geopolitical lines pause **is a key and possibly existential threat to human space activity**,” Northumbria University’s Newman said. “To China and its allies, the Accords represent an attempt to bypass traditional forum for international decision making,” he added. “It is therefore becoming increasingly **difficult to achieve** the kind of unified **agreements** that are necessary in order **to deal with** problems such as **space debris**, space traffic management and the **exploitation of extra-terrestrial resources**.”

#### 2] Appropriation is key to meet China’s goals through space resources and tech

Campo 21 [Jose A. Martin del Campo, J.D. Candidate at Texas A&M University School of Law, 3-23-2021, “Finders K Finders Keepers: Who Has Say Over Private Property in Space,” Texas A&M Journal of Property Law, https://scholarship.law.tamu.edu/cgi/viewcontent.cgi?article=1155&context=journal-of-property-law]/Kankee

I. INTRODUCTION On October 4, 1957, the Space Age officially began when the Soviet Union launched Sputnik into orbit, the first successful, human-made satellite.1 A little more than a decade later, on July 20, 1969, American astronauts Neil Armstrong and Edwin “Buzz” Aldrin became the first humans to land and step foot on the moon.2 Neil Armstrong marked the completion of John F. Kenney’s national goal of landing an astronaut on the moon when he radioed back to Earth “[t]hat’s one small step for man, one giant leap for mankind.”3 The launch of Sputnik, the moon landing, and other endeavors achieved by the scientific community, kick-started a chain of events leading to the current ambition of exploring outer space and mining resources throughout the solar system. The push for unlocking low-cost space travel and space industrialization by entrepreneurs, like Elon Musk and Jeff Bezos, propels the search for extraterrestrial materials such as water and minerals.4 According to NASA, minerals found in the asteroid belt between Mars and Jupiter contain an estimated value of approximately $100 billion for every person on Earth.5 However, uncertainty lingers because private entities are unsure that they will possess property rights to their payload or the mined celestial body.6 Celestial bodies refer to naturally occurring objects in space. The United States Commercial Space Transportation Advisory Committee (“COMSTAC”), an advisory body to the Federal Aviation Administration’s (“FAA”) Office of Commercial Space Transportation (“FAA-AST”), has undertaken review regarding the granting of private property licenses.7 COMSTAC expressed a desire to confirm that private entity resource extractions may be owned and utilized as it deems appropriate.8 The current framework of space law is a combination of agreements with the foundation of space law consisting of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (“Outer Space Treaty”).9 At the time of signing, the Outer Space Treaty hoped to foster cooperative and peaceful exploration of outer space without discrimination of any kind.10 However, Article II of the Outer Space Treaty contains the bane of private property rights in outer space, which forbids the national appropriation of the moon and other celestial bodies.11 While the Outer Space Treaty explicitly mentions the prohibition of public entities claiming celestial bodies, private enterprises risk failing to have their interest in property rights recognized by the global community. Private entities and investors grapple with the issues pertaining to their rights to mine and extract resources from outer space legally. Without further international recognition of their property rights, private entities may shy away from exploring the concept of celestial mining. The issue of not knowing what laws are applicable, or to whom private companies are accountable, impedes the progress private entities make in achieving their goal of harvesting extraterrestrial resources. Private entities fear that the non-appropriation clause of Article II of the Outer Space Treaty, the epicenter of the issue, will strip them of the right to transport their mined resources back to Earth. A new legal regime will likely need to be formed that facilitates the continuation of innovation and promotes the exploration of outer space. Whether or not past private and public international doctrines, i.e., the law of the sea, may provide guidance in creating a new doctrine of space law is yet to be determined. The advancement in modern technology, along with the depletion of natural resources, creates a unique opportunity for private entities to resolve this issue through the exploitation of outer space. Space law is once again relevant due to its inadequacies in protecting the property rights of said entities in space. Part II will explore the different treaties and principles that gave rise to space law, and Part III will analyze whether the application of such principles should continue, or if the establishment of a new regime offers a more beneficial long-term solution. Part IV will then explore the structure of a new outer space regime and the enforcement of property rights. II. LEGAL PRINCIPLES INFLUENCING THE DEVELOPMENT OF SPACE LAW

#### 3] It’s exponential – more and more companies will follow

**Jiang Zhao 18** [Shengli Jiang & Yun Zhao (2018) “The Aftermath of the US Space Resource Exploration and Utilization Act: What’s Left for China?” [https://pdfs.semanticscholar.org/c3a4/fb6e0f91f4d8a13ddac4b0f949f6c3afa5c0.pdf //](https://pdfs.semanticscholar.org/c3a4/fb6e0f91f4d8a13ddac4b0f949f6c3afa5c0.pdf%20//) JB]

Olinga argued that the legal regime prohibiting the **appropriation** of space resources deprives **private entities** of the guarantee for payback of costs invested in the exploration and utilization of space resources, and **makes them lose** the driving force of further conducting the **exploration** and utilization.81 As a consequence, whole activities of **exploring** and utilizing space resources could **get into** the trouble of **slow development** or even **stagnation**. Therefore, it is strongly argued that **private entities should be granted** the right of **appropriation over space resources**, so that **they may engage in** the **exploration** and utilization of **space resources more positively**, under the attraction of expected profits to be derived from the exploration and utilization.82 It is necessary **to attract private entities** to engage in the exploration and utilization of space resources, so as **to conform** **to** the current trend of the **booming** development of the commercial **space industry**; maximize the **economic value** of space resources; and stimulate the development of space science and technology in return.83 The negative results from the appropriation of space resources will be far beyond the benefits to be brought thereby. That is, the international rule of law, the peace, and security of outer space should take the priority to the interests from the exploration and utilization of space resources.

#### 4] Space becomes a new domain where China establishes primacy and appropriation is their golden ticket

**Jiang Zhao 18** [Shengli Jiang & Yun Zhao (2018) “The Aftermath of the US Space Resource Exploration and Utilization Act: What’s Left for China?” [https://pdfs.semanticscholar.org/c3a4/fb6e0f91f4d8a13ddac4b0f949f6c3afa5c0.pdf //](https://pdfs.semanticscholar.org/c3a4/fb6e0f91f4d8a13ddac4b0f949f6c3afa5c0.pdf%20//) JB]

China is a “responsible major country” of **space activities**.96 It should thus take corresponding positions in response to the adoption of the Act. With rapid development of space science and technology, **China** will be ready to **engage** in the exploration and **utilization of space resources** in the near future.97 Space resources have high value but limited quantity. As **space science** and technology **for** exploring and **utilizing** those space **resources** may be used for both **civilian** and **military purposes**, it is necessary for China to firmly **refute** the **legality of granting private entities** the right of **appropriation over space resources** for global common interest. In addition, China should **not** follow the **unilateral approach** of appropriating space resources. Instead, it should actively promote the improvement of the existing space legal regime, taking the leading role in establishing an **international mechanism** governing the exploration and **utilization of space resources**. In this process, China should take full account of due interests of the whole international community in the exploration and utilization of space resources, as well as maintain the international rule of law for the peace and security of outer space.98 On the domestic level, meanwhile, China is in the process of drafting its national space law which will provide legal basis for the space industry.99 This law is expected to clarify the legal status of space resources, the attribution of the right of appropriation, the right to use and profits over space resources, and the rules for the exploration and utilization of space resources by both governmental and private entities. On the international law level, China should play a more active role in the international space law-making process regarding space commercialization and privatization.100 In this course, China is willing to **establish** a **global governance** mechanism for space exploration and utilization. This part will focus on an international mechanism for the space mining activities.

#### 5] Mining basing competition causes war

Jamasmie 21 — (Cecilia Jamasmie, Cecilia has covered mining for more than a decade. She is particularly interested in Corporate Social Responsibility (CSR), Diamonds and Latin America. Cecilia has been interviewed by BBC News and CBC among others and has been a guest speaker at mining conventions, including MINExpo 2016 and the World’s Copper Conference 2018. She is also member of the expert panel on Social License to Operate (SLO) at the European project MIREU (Mining and Metallurgic Regions EU). She holds a Master of Journalism from the University of British Columbia, and is based in Nova Scotia., “Experts warn of brewing space mining war among US, China and Russia“, MINING, 4-29-21, Available Online at https://www.mining.com/experts-warn-of-brewing-space-mining-war-among-us-china-and-russia/, accessed 1-11-2022, HKR-AR)

A brewing war to set a mining base in space is likely to see China and Russia joining forces to keep the US increasing attempts to dominate extra-terrestrial commerce at bay, experts warn.

The Trump Administration took an active interest in space, announcing that America would return astronauts to the moon by 2024 and creating the Space Force as the newest branch of the US military.

It also proposed global legal framework for mining on the moon, called the Artemis Accords, encouraging citizens to mine the Earth’s natural satellite and other celestial bodies with commercial purposes.

The directive classified outer space as a “legally and physically unique domain of human activity” instead of a “global commons,” paving the way for mining the moon without any sort of international treaty.

Spearheaded by the US National Aeronautics and Space Administration (NASA), the Artemis Accords were signed in October by Australia, Canada, England, Japan, Luxembourg, Italy and the United Emirates.

“Unfortunately, the Trump Administration exacerbated a national security threat and risked the economic opportunity it hoped to secure in outer space by failing to engage Russia or China as potential partners,” says Elya Taichman, former legislative director for then-Republican Michelle Lujan Grisham.

“Instead, the Artemis Accords have driven China and Russia toward increased cooperation in space out of fear and necessity,” he writes.

Russia’s space agency Roscosmos was the first to speak up, likening the policy to colonialism.

“There have already been examples in history when one country decided to start seizing territories in its interest — everyone remembers what came of it,” Roscosmos’ deputy general director for international cooperation, Sergey Saveliev, said at the time.

China, which made history in 2019 by becoming the first country to land a probe on the far side of the Moon, chose a different approach. Since the Artemis Accords were first announced, Beijing has approached Russia to jointly build a lunar research base.

President Xi Jinping has also he made sure China planted its flag on the Moon, which happened in December 2020, more than 50 years after the US reached the lunar surface.

#### 6] That goes nuclear – space is fragile and offense dominant, so even small incidents escalate

Laura Grego 18, Senior Scientist in the Global Security Program at the Union of Concerned Scientists, Postdoctoral Researcher at the Harvard-Smithsonian Center for Astrophysics, PhD in Experimental Physics at the California Institute of Technology, Space and Crisis Stability, Union of Concerned Scientists, 3-19-18, <https://www.law.upenn.edu/live/files/7804-grego-space-and-crisis-stabilitypdf>

Why space is a particular problem for crisis stability

For a number of reasons, space poses particular challenges in preventing a crisis from starting or from being managed well. Some of these are to do with the physical nature of space, such as the short timelines and difficulty of attribution inherent in space operations. Some are due to the way space is used, such as the entanglement of strategic and tactical missions and the prevalence of dual-use technologies. Some are due to the history of space, such the absence of a shared understanding of appropriate behaviors and consequences, and a dearth of stabilizing personal and institutional relationships. While some of these have terrestrial equivalents, taken together, they present a special challenge.

The vulnerability of satellites and first strike incentives

Satellites are inherently fragile and difficult to protect; in the language of strategic planners, space is an “offense-dominant” regime. This can lead to a number of pressures to strike first that don‘t exist for other, better-protected domains. Satellites travel on predictable orbits, and many pass repeatedly over all of the earth‘s nations. Low-earth orbiting satellites are reachable by missiles much less capable than those needed to launch satellites into orbit, as well as by directed energy which can interfere with sensors or with communications channels. Because launch mass is at a premium, satellite armor is impractical. Maneuvers on orbit need costly amounts of fuel, which has to be brought along on launch, limiting satellites‘ ability to move away from threats. And so, these very valuable satellites are also inherently vulnerable and may present as attractive targets.

Thus, an actor with substantial dependence on space has an incentive to strike first if hostilities look probable, to ensure these valuable assets are not lost. Even if both (or all) sides in a conflict prefer not to engage in war, this weakness may provide an incentive to approach it closely anyway.

A RAND Corporation monograph commissioned by the Air Force15 described the issue this way:

First-strike stability is a concept that Glenn Kent and David Thaler developed in 1989 to examine the structural dynamics of mutual deterrence between two or more nuclear states.16 It is similar to crisis stability, which Charles Glaser described as ―a measure of the countries‘ incentives not to preempt in a crisis, that is, not to attack first in order to beat the attack of the enemy,‖17 except that it does not delve into the psychological factors present in specific crises. Rather, first strike stability focuses on each side‘s force posture and the balance of capabilities and vulnerabilities that could make a crisis unstable should a confrontation occur.

For example, in the case of the United States, the fact that conventional weapons are so heavily dependent on vulnerable satellites may create incentives for the US to strike first terrestrially in the lead up to a confrontation, before its space-derived advantages are eroded by anti-satellite attacks.18 Indeed, any actor for which satellites or space-based weapons are an important part of its military posture, whether for support missions or on-orbit weapons, will feel “use it or lose it” pressure because of the inherent vulnerability of satellites.

Short timelines and difficulty of attribution

The compressed timelines characteristic of crises combine with these “use it or lose it” pressures to shrink timelines. This dynamic couples dangerously with the inherent difficulty of determining the causes of satellite degradation, whether malicious or from natural causes, in a timely way.

Space is a difficult environment in which to operate. Satellites orbit amidst increasing amounts of debris. A collision with a debris object the size of a marble could be catastrophic for a satellite, but objects of that size cannot be reliably tracked. So a failure due to a collision with a small piece of untracked debris may be left open to other interpretations. Satellite electronics are also subject to high levels of damaging radiation. Because of their remoteness, satellites as a rule cannot be repaired or maintained. While on-board diagnostics and space surveillance can help the user understand what went wrong, it is difficult to have a complete picture on short timescales. Satellite failure on-orbit is a regular occurrence19 (indeed, many satellites are kept in service long past their intended lifetimes).

In the past, when fewer actors had access to satellite-disrupting technologies, satellite failures were usually ascribed to “natural” causes. But increasingly, even during times of peace operators may assume malicious intent. More to the point, in a crisis when the costs of inaction may be perceived to be costly, there is an incentive to choose the worst-case interpretation of events even if the information is incomplete or inconclusive.

Entanglement of strategic and tactical missions

During the Cold War, nuclear and conventional arms were well separated, and escalation pathways were relatively clear. While space-based assets performed critical strategic missions, including early warning of ballistic missile launch and secure communications in a crisis, there was a relatively clear sense that these targets were off limits, as attacks could undermine nuclear deterrence. In the Strategic Arms Limitation Treaty, the US and Soviet Union pledged not to interfere with each other‘s ―national technical means‖ of verifying compliance with the agreement, yet another recognition that attacking strategically important satellites could be destabilizing.20 There was also restraint in building the hardware that could hold these assets at risk.

However, where the lines between strategic satellite missions and other missions are blurred, these norms can be weakened. For example, the satellites that provide early warning of ballistic missile launch are associated with nuclear deterrent posture, but also are critical sensors for missile defenses. Strategic surveillance and missile warning satellites also support efforts to locate and destroy mobile conventional missile launchers. Interfering with an early warning sensor satellite might be intended to dissuade an adversary from using nuclear weapons first by degrading their missile defenses and thus hindering their first-strike posture. However, for a state that uses early warning satellites to enable a “hair trigger” or launch-on-attack posture, the interference with such a satellite might instead be interpreted as a precursor to a nuclear attack. It may accelerate the use of nuclear weapons rather than inhibit it.

Misperception and dual-use technologies

Some space technologies and activities can be used both for relatively benign purposes but also for hostile ones. It may be difficult for an actor to understand the intent behind the development, testing, use, and stockpiling of these technologies, and see threats where there are none. (Or miss a threat until it is too late.) This may start a cycle of action and reaction based on misperception. For example, relatively low-mass satellites can now maneuver autonomously and closely approach other satellites without their cooperation; this may be for peaceful purposes such as satellite maintenance or the building of complex space structures, or for more controversial reasons such as intelligence-gathering or anti-satellite attacks.

Ground-based lasers can be used to dazzle the sensors of an adversary‘s remote sensing satellites, and with sufficient power, they may damage those sensors. The power needed to dazzle a satellite is low, achievable with commercially available lasers coupled to a mirror which can track the satellite. Laser ranging networks use low-powered lasers to track satellites and to monitor precisely the Earth‘s shape and gravitational field, and use similar technologies. 21

Higher-powered lasers coupled with satellite-tracking optics have fewer legitimate uses. Because midcourse missile defense systems are intended to destroy long-range ballistic missile warheads, which travel at speeds and altitudes comparable to those of satellites, such defense systems also have inherent ASAT capabilities. In fact, while the technologies being developed for long-range missile defenses might not prove very effective against ballistic missiles—for example, because of the countermeasure problems associated with midcourse missile defense— they could be far more effective against satellites. This capacity is not just theoretical. In 2007, China demonstrated a direct-ascent anti-satellite capability which could be used both in an ASAT and missile defense role, and in 2009, the United States used a ship-based missile defense interceptor to destroy a satellite, as well. US plans indicated a projected inventory of missile defense interceptors with capability to reach all low earth orbiting satellites in the dozens in the 2020s, and in the hundreds by 2030.22

Discrimination

The consequences of interfering with a satellite may be vastly different depending on who is affected and how, and whether the satellite represents a legitimate military objective.

However, it will not always be clear who the owners and operators of a satellite are, and users of a satellite‘s services may be numerous and not public. Registration of satellites is incomplete23 and current ownership is not necessarily updated in a readily available repository. The identification of a satellite as military or civilian may be deliberately obscured. Or its value as a military asset may change over time; for example, the share of capacity of a commercial satellite used by military customers may wax and wane. A potential adversary‘s satellite may have different or additional missions that are more vital to that adversary than an outsider may perceive. An ASAT attack that creates persistent debris could result in significant collateral damage to a wide range of other actors; unlike terrestrial attacks, these consequences are not limited geographically, and could harm other users unpredictably.

In 2015, the Pentagon‘s annual wargame, or simulated conflict, involving space assets focused on a future regional conflict. The official report out24 warned that it was hard to keep the conflict contained geographically when using anti-satellite weapons:

As the wargame unfolded, a regional crisis quickly escalated, partly because of the interconnectedness of a multi-domain fight involving a capable adversary. The wargame participants emphasized the challenges in containing horizontal escalation once space control capabilities are employed to achieve limited national objectives.

Lack of shared understanding of consequences/proportionality

States have fairly similar understandings of the implications of military actions on the ground, in the air, and at sea, built over decades of experience. The United States and the Soviet Union/Russia have built some shared understanding of each other‘s strategic thinking on nuclear weapons, though this is less true for other states with nuclear weapons. But in the context of nuclear weapons, there is an arguable understanding about the crisis escalation based on the type of weapon (strategic or tactical) and the target (counterforce—against other nuclear targets, or countervalue—against civilian targets).

Because of a lack of experience in hostilities that target space-based capabilities, it is not entirely clear what the proper response to a space activity is and where the escalation thresholds or “red lines” lie. Exacerbating this is the asymmetry in space investments; not all actors will assign the same value to a given target or same escalatory nature to different weapons.

#### 7] China space commercialization uniquely risks cascades – they ignore norms and don’t register satellites which prevents tracking

Swinhoe 21 – Editor at Datacenter Dynamics. Previously he was at IDG in roles including UK Editor at CSO Online and Senior Staff Writer at IDG Connect. [Dan, “China’s moves into mega satellite constellations could add to space debris problem,” 4/20/2021, <https://www.datacenterdynamics.com/en/analysis/chinas-moves-into-mega-satellite-constelations-could-add-to-space-debris-problem/>]

Of the 3,000-odd operational satellites currently in orbit, a little over 400 belong to China or Chinese companies. The number of commercial companies in the West launching satellites has skyrocketed in recent years, and SpaceX now operates more satellites than any other company or government.

But refusing to be left behind, China is planning both state and commercial deployments of constellation satellites in huge numbers in the coming years, which could post an increased risk to in-orbit operations if Chinese companies don’t take due care in how they behave.

The new commercial space race

A report by the Secure World Foundation says a 2014 document from the Chinese Government known as “Document 60” (Official English Language Title: Guiding Opinions of the State Council on Innovating the Investment and Financing Mechanisms in Key Areas and Encouraging Social Investment) was the start of China’s modern commercial space sector. And in 2020, satellite Internet was included in the scope of China’s New Infrastructure policy initiative. Space is also part of China’s expansive Belt and Road initiative, which all combined have led to an explosion in the country’s commercial space ambitions.

China is beginning to “get its act together” around commercial use of space, Jonathan McDowell of the Harvard-Smithsonian Center for Astrophysics tells DCD. Whereas in previous years he says China has had many government satellites and some quasi-commercial satellites with strong ties to government, but now there are true commercial Chinese companies in space.

“We have the same phenomenon as the US companies in that they're moving fast and they're innovative and doing new things.”

But as Chinese companies look to follow the likes of SpaceX and OneWeb in deploying large numbers of satellites, he warns their lack of care in operations could potentially damage space for everyone.

China’s commercial space industry blasts off

A number of private space companies including LinkSpace, OneSpace, iSpace, LandSpace, and ExPace, have all launched in recent years. As well developing their own rockets, these companies are launching satellites of all shapes and sizes into Low Earth Orbit (LEO) with the aim of forming their own constellations to rival those of Western companies.

Bao Weimin, member of the National Committee of the Chinese People’s Political Consultative Conference and director of the Science and Technology Committee of the Aerospace Science and Technology Group, recently announced plans to establish a national satellite network company to be responsible for “coordinating the planning and operation of space satellite Internet network construction.”

The China Aerospace Science and Industry Corporation (CASIC), a state-owned enterprise, outlined its plans to preliminarily finish the construction of the Xingyun project, an 80-satellite LEO narrowband Internet of Things constellation, by 2025 in addition to 320 Hongyan communications satellites.

China Telecom’s satellite communications reportedly has plans to launch 10,000 satellites in the next five to ten years under the name ‘China StarNet’. Spacety is also launching a constellation of imagery satellites and has launched at least 20 so far. Another company called GW has filed for spectrum allocation from the International Telecommunication Union for two broadband constellations called GW-A59 and GW-2 that would include almost 13,000 satellites.

A report from IDA into China’s commercial space industry found others including Zhuhai Orbita, GalaxySpace, MinoSpace, LaserFleet, Head Aerospace and numerous others are also developing constellations from which, like US counterparts, these companies aim to provide satellite broadband, 5G, IoT, and various data services. Though many are in the early stages of development, most plan to launch the first of what could be hundreds or even thousands of satellites within the next few years.

While most companies can’t boast the same level of funding as US space companies – VC funding for Chinese space companies was up to $516 million in 2018 compared to the $2.2 billion US companies raised – they are bringing in investment; earlier this year Beijing Commsat received more than $4.5 billion in funding from the China Internet Investment fund, with more than $10 billion in additional funding promised in the future.

Xie Tao, founder of Beijing Commsat Technology Development Co., Ltd, told China Money Network he expects the country to launch 30,000 to 40,000 Satellites in the future, compared to 40,000 to 60,000 launched by the US.

“Space in the orbit is allocated on a first-come, first-served basis and the onus will be on these latecomers to ensure their satellites will not collide with existing ones,” Commsat’s Xie previously said. “The low-Earth orbit is becoming increasingly crowded and the space land grab is on.”

China isn’t up to speed in orbital norms

While the UN tightly controls GEO orbits, offering countries licenses for a set number of slots in the closely-packed and highly valuable planes, there is no such limit at lower orbits. The number of satellites that companies can launch at LEO is limited only by what local regulators will permit, despite the machines circling the entire planet in around 90 minutes.

And space is becoming increasingly crowded. The number of satellites being launched annually is beginning to reach the thousands, leftovers parts from previous launches and satellites can mount up if not properly disposed of, and debris from previous in-orbit incidents means LEO is full of thousands of pieces of potentially satellite-destroying junk and debris.

Around 28,200 pieces of space junk and debris are currently being tracked in orbit but ESA estimates there could be up to hundreds of thousands of potentially harmful pieces in orbit. At its most extreme, Kessler syndrome predicts a scenario where the space around Earth is so full of satellites and debris that it becomes unmanageable and collisions begin to cascade, causing a chain reaction of collisions which render many orbits out of use for generations.

China has as much right to operate satellites as Western companies, but the current lack of adherence to ‘space norms’ could increase risks further. McDowell warns the ‘explosion’ of Chinese activity could have a massive impact on the usability of space.

“Chinese adherence to things like space debris norms and registration norms is, I would say, about 10 years behind everybody else, if not more” he says. “In UN registration of satellites, they're being very incomplete. They're not registering a lot of their CubeSats and things like that. They're not really being as careful, and they're not as transparent in what's going on.”

Chinese commercial satellites are subject the same risks as Western ones in space; extreme temperatures, crowded operating environment, and new companies seeing large numbers of failures as they go through rapid development. But a lack of proper registration can create more risk of collisions, which can have catastrophic effects, especially with larger satellites at higher orbits.

#### 8] Debris cascades – early warning is an independent impact as well

**Blatt 20** [Talia, joint concentration in Social Studies and Integrative Biology at Harvard, specialization in East Asian geopolitics and security issues] “Anti-Satellite Weapons and the Emerging Space Arms Race,” Harvard International Review, May 26, 2020, <https://hir.harvard.edu/anti-satellite-weapons-and-the-emerging-space-arms-race/> TG

Despite their deterrent functions, ASATs are more likely to provoke or exacerbate conflicts than dampen them, especially given the risk they [pose](https://thebulletin.org/2019/06/arms-control-in-outer-space-the-russian-angle-and-a-possible-way-forward/) to early warning satellites. These satellites are a crucial element of US ballistic missile defense, capable of [detecting missiles](https://www.globalsecurity.org/space/world/japan/warning.htm) immediately after launch and tracking their paths.

Suppose a US early warning satellite goes dark, or is shut down. Going dark could signal a glitch, but in a world in which other countries have ASATs, it could also signal the beginning of an attack. Without early warning satellites, the United States is much more susceptible to nuclear missiles. Given the strategy of counterforcing—[targeting](https://www.belfercenter.org/sites/default/files/files/publication/isec_a_00273_LieberPress.pdf) nuclear silos rather than populous cities to prevent a nuclear counterattack—the Americans might believe their nuclear weapons are imminently at risk. It could be [twelve hours](https://books.google.com/books?id=ET8lDwAAQBAJ&pg=PA1&lpg=PA1&dq=%22Protecting+Space+Assets%22+johnson-freese&source=bl&ots=6Oq0IdeBjw&sig=ACfU3U1G6Hj8QdP4JlCRNxA6i5XplZwHyg&hl=en&sa=X&ved=2ahUKEwj1n-jT2YzpAhUugnIEHUuMCu4Q6AEwA3oECAkQAQ#v=onepage&q=%22Protecting%20Space%20Assets%22%20johnson-freese&f=false) before the United States regains satellite function, which is too long to wait to put together a nuclear counterattack. The United States, therefore, might move to mobilize a nuclear attack against Russia or China over what might just be a piece of debris shutting off a satellite.

Additionally, accidental warfare, or strategic miscalculation, is uniquely likely in space. It is [much easier](https://books.google.com/books?id=VyXTDwAAQBAJ&pg=PA339&lpg=PA339&dq=space+offense+dominant&source=bl&ots=Mw0bgJ51qf&sig=ACfU3U3DeZiEHpr9nfszlCbJZIoyyssIpg&hl=en&sa=X&ved=2ahUKEwjrs-WD3IzpAhVulHIEHbL0AE4Q6AEwCXoECAoQAQ#v=onepage&q=space%20offense%20dominant&f=false) to hold an adversary’s space systems in jeopardy with destructive ASATs than it is to [sustainably defend](https://www.cnas.org/publications/commentary/the-us-military-should-not-be-doubling-down-on-space) a system, which is expensive and in some cases not technologically feasible because of limitations on satellite movement. Space is therefore [considered](https://books.google.com/books?id=VyXTDwAAQBAJ&pg=PA339&lpg=PA339&dq=space+offense+dominant&source=bl&ots=Mw0bgJ51qf&sig=ACfU3U3DeZiEHpr9nfszlCbJZIoyyssIpg&hl=en&sa=X&ved=2ahUKEwjrs-WD3IzpAhVulHIEHbL0AE4Q6AEwCXoECAoQAQ#v=onepage&q=space%20offense%20dominant&f=false) offense-dominant; offensive tactics like weapons development are prioritized over defensive measures, such as [improving GPS](https://www.politico.com/story/2018/04/06/outer-space-war-defense-russia-china-463067) or making satellites more resistant to jamming.

As a result, countries are left with poorly defended space systems and rely on offensive posturing, which increases the risk that their actions are perceived as aggressive and incentivizes rapid, risky counterattacks because militaries cannot rely on their spaced-based systems after first strikes.

There are several hotspots in which ASATs and offensive-dominant systems are particularly relevant. Early warning satellites [play](https://www.politico.com/story/2018/04/06/outer-space-war-defense-russia-china-463067) a central role in US readiness in the event of a conflict involving North Korea. News of North Korean missile launches comes from these satellites. Given North Korea’s [history](https://www.bbc.com/news/world-asia-pacific-11813699) of nuclear provocations, unflinchingly hostile rhetoric towards the United States and South Korea, and diplomatic opacity, North Korea is always a threatening, unknowable adversary, but recent developments have magnified the risk. With the health of Kim Jong-un [potentially in jeopardy](https://apnews.com/f5d302ae65b03838173e40848223b771), a succession battle or even civil war on the peninsula [raises the chances](https://www.express.co.uk/news/world/1273890/Kim-Jong-un-dead-North-Korea-nuclear-weapon-news-latest-death-US) of loose nukes. If the regime is terminal, traditional MAD risk calculus will become moot; with nothing to lose, North Korea would have no reason to hold back its nuclear arsenal. Or China [might decide](https://foreignpolicy.com/2020/04/28/kim-jong-un-china-north-korea/) to seize military assets and infrastructure of the regime. If the US does not have its early warning satellites because they have been taken out in an ASAT attack, the US, South Korea, and Japan are all in imminent nuclear peril, while China could be in a position to fundamentally reshape East Asian geopolitics.

The South China Sea is another hotspot in which ASATs could risk escalation. China [is developing](https://missiledefenseadvocacy.org/missile-threat-and-proliferation/todays-missile-threat/china-anti-access-area-denial-coming-soon/) Anti-Access Area Denial (A2/AD) in the South China Sea, a combination of long range radar with air and maritime defense meant to deny US freedom of navigation in the region. Given the disputed nature of territory in the South China Sea, the United States and its allies do not want China to successfully close off the region.

#### 9] Development of Chinese Anti-Satellite Weapons emboldens China to invade Taiwan – US draw in from alliance commitments and nuclear war.

Chow and Kelley 21 [(Brian G., policy analyst for the Institute of World Politics, Ph.D in physics from Case Western Reserve University, MBA and Ph.D in finance from the University of Michigan, and Brandon, graduate of Georgetown’s School of Foreign Service) “China’s Anti-Satellite Weapons Could Conquer Taiwan—Or Start a War,” National Interest, 8/21/2021] JL

If current trends hold, then China’s Strategic Support Force will be capable by the late 2020s of holding key U.S. space assets at risk. Chinese military doctrine, statements by senior officials, and past behavior all suggest that China may well believe threatening such assets to be an effective means of deterring U.S. intervention. If so, then the United States would face a type of “Sophie’s Choice”: decline to intervene, potentially leading allies to follow suit and Taiwan to succumb without a fight, thereby enabling Xi to achieve his goal of “peacefully” snuffing out Taiwanese independence; or start a war that would at best be long and bloody and might well even cross the nuclear threshold.

This emerging crisis has been three decades in the making. In 1991, China watched from afar as the United States used space-enabled capabilities to obliterate the Iraqi military from a distance in the first Gulf War. The People’s Liberation Army quickly set to work developing capabilities targeted at a perceived Achilles’ heel of this new American way of war: reliance on vulnerable space systems.

This project came to fruition with a direct ascent ASAT weapons test in 2007, but the test was limited in two key respects. First, it only reached low Earth orbit. Second, it generated thousands of pieces of long-lasting space junk, provoking immense international ire. This backlash appears to have taken China by surprise, driving it to seek new, more usable ASAT types with minimal debris production. Now, one such ASAT is nearing operational status: spacecraft capable of rendezvous and proximity operations (RPOs).

Such spacecraft are inevitable and cannot realistically be limited. The United States, European Union, China, and others are developing them to provide a range of satellite services essential to the new space economy, such as in situ repairs and refueling of satellites and active removal of space debris. But RPO capabilities are dual-use: if a satellite can grapple space objects for servicing, then it might well be capable of grappling an adversary’s satellite to move it out of its servicing orbit. Perhaps it could degrade or disable it by bending or disconnecting its solar panels and antennas all while producing minimal debris.

This is a serious threat, primarily because no international rules presently exist to limit close approaches in space. Left unaddressed, this lacuna in international law and space policy could enable a prospective attacker to pre-position, during peacetime, as many spacecraft as they wish as close as they wish to as many high-value targets as they wish. The result would be an ever-present possibility of sudden, bolt-from-the-blue attacks on vital space assets—and worse, on many of them at once.

China has conducted at least half a dozen tests of RPO capabilities in space since 2008, two of which went on for years. Influential space experts have noted that these tests have plausible peaceful purposes and are in many cases similar to those conducted by the United States. This, however, does not make it any less important to establish effective legal, policy, and technical counters to their offensive use. Even if it were certain that these capabilities are intended purely for peaceful applications—and it is not at all clear that that is the case—China (or any other country) could at any time decide to repurpose these capabilities for ASAT use.

There is still time to get out ahead of this threat, but likely not for much longer. China’s RPO capabilities have, thus far, lagged about five years behind those of the United States. There are reasons to believe this gap may close, but even assuming that it holds, we should expect to see China demonstrate an operational dual-use rendezvous spacecraft by around 2025. (The first instance of a U.S. commercial satellite docking with another satellite to change its orbit occurred in February 2020.)

At the same time, China is expanding its capacity for rapid spacecraft manufacturing. The Global Times reported in January that China’s first intelligent mass production line is set to produce 240 small satellites per year. In April, Andrew Jones at SpaceNews reported that China is developing plans to quickly produce and loft a thirteen thousand-satellite national internet megaconstellation. It is not unreasonable to assume that China could manufacture two hundred small rendezvous ASAT spacecraft by 2029, possibly more.

If this happens, and Beijing was to decide in 2029 to launch these two hundred small RPO spacecraft and position them in close proximity to strategically vital assets, then China would be able to simultaneously threaten disablement of the entire constellations of U.S. satellites for missile early warning (about a dozen satellites with spares included); communications in a nuclear-disrupted environment (about a dozen); and positioning, navigation, and timing (about three dozen); along with several dozen key communications, imagery, and meteorology satellites. Losing these assets would severely degrade U.S. deterrence and warfighting capabilities, yet once close pre-positioning has occurred such losses become almost impossible to prevent. For this reason, such pre-positioning could conceivably deter the United States from coming to Taiwan’s aid due to the prospect that intervention would spur China to disable these critical space systems. Without their support, the war would be much bloodier and costlier—a daunting proposition for any president.

Should the United States fail to intervene, the consequences would be disastrous for both Washington and its allies in East Asia, and potentially the credibility of U.S. defense commitments around the globe. Worse yet, however, might be what could happen if China believes that such a threat will succeed but proves to be wrong. History is rife with examples of major wars arising from miscalculations such as this, and there are many pathways by which such a situation could easily escalate out of control to a full-scale conventional conflict or even to nuclear use.

#### 10] Nuclear war causes extinction – famine and climate change

Starr 15 [(Steven, Director of the University of Missouri’s Clinical Laboratory Science Program and a senior scientist at the Physicians for Social Responsibility) “Nuclear War, Nuclear Winter, and Human Extinction,” Federation of American Scientists, 10/14/2015] DD

While it is impossible to precisely predict all the human impacts that would result from a nuclear winter, it is relatively simple to predict those which would be most profound. That is, a nuclear winter would cause most humans and large animals to die from nuclear famine in a mass extinction event similar to the one that wiped out the dinosaurs.

Following the detonation (in conflict) of US and/or Russian launch-ready strategic nuclear weapons, nuclear firestorms would burn simultaneously over a total land surface area of many thousands or tens of thousands of square miles. These mass fires, many of which would rage over large cities and industrial areas, would release many tens of millions of tons of black carbon soot and smoke (up to 180 million tons, according to peer-reviewed studies), which would rise rapidly above cloud level and into the stratosphere. [For an explanation of the calculation of smoke emissions, see Atmospheric effects & societal consequences of regional scale nuclear conflicts.]

The scientists who completed the most recent peer-reviewed studies on nuclear winter discovered that the sunlight would heat the smoke, producing a self-lofting effect that would not only aid the rise of the smoke into the stratosphere (above cloud level, where it could not be rained out), but act to keep the smoke in the stratosphere for 10 years or more. The longevity of the smoke layer would act to greatly increase the severity of its effects upon the biosphere.

Once in the stratosphere, the smoke (predicted to be produced by a range of strategic nuclear wars) would rapidly engulf the Earth and form a dense stratospheric smoke layer. The smoke from a war fought with strategic nuclear weapons would quickly prevent up to 70% of sunlight from reaching the surface of the Northern Hemisphere and 35% of sunlight from reaching the surface of the Southern Hemisphere. Such an enormous loss of warming sunlight would produce Ice Age weather conditions on Earth in a matter of weeks. For a period of 1-3 years following the war, temperatures would fall below freezing every day in the central agricultural zones of North America and Eurasia. [For an explanation of nuclear winter, see Nuclear winter revisited with a modern climate model and current nuclear arsenals: Still catastrophic consequences.]

Nuclear winter would cause average global surface temperatures to become colder than they were at the height of the last Ice Age. Such extreme cold would eliminate growing seasons for many years, probably for a decade or longer. Can you imagine a winter that lasts for ten years?

The results of such a scenario are obvious. Temperatures would be much too cold to grow food, and they would remain this way long enough to cause most humans and animals to starve to death.

Global nuclear famine would ensue in a setting in which the infrastructure of the combatant nations has been totally destroyed, resulting in massive amounts of chemical and radioactive toxins being released into the biosphere. We don’t need a sophisticated study to tell us that no food and Ice Age temperatures for a decade would kill most people and animals on the planet.  Would the few remaining survivors be able to survive in a radioactive, toxic environment?

### **1AC – Framing [Policy]**

#### I value morality.

#### The standard is act hedonistic util.

#### [1] Pleasure and pain are the starting point for moral reasoning—they’re our most baseline desires and the only things that explain the intrinsic value of objects or actions

Moen 16, Ole Martin (PhD, Research Fellow in Philosophy at University of Oslo). "An Argument for Hedonism." Journal of Value Inquiry 50.2 (2016): 267.

Let us start by observing, empirically, that **a widely shared judgment about intrinsic value** and disvalue **is that pleasure is intrinsically valuable and pain is intrinsically disvaluable**. On virtually any proposed list of intrinsic values and disvalues (we will look at some of them below), pleasure is included among the intrinsic values and pain among the intrinsic disvalues. This inclusion makes intuitive sense, moreover, for **there is something undeniably good about the way pleasure feels and something undeniably bad about the way pain feels**, and neither the goodness of pleasure nor the badness of pain seems to be exhausted by the further effects that these experiences might have. “Pleasure” and “pain” **are** here **understood inclusively**, as encompassing anything hedonically positive and anything hedonically negative. 2 The special value statuses of pleasure and pain are manifested in how we treat these experiences in our everyday reasoning about values. If you tell me that you are heading for the convenience store**, I might ask: “What for**?” This is a reasonable question, for when you go to the convenience store you usually do so, not merely for the sake of going to the convenience store, but for the sake of achieving something further that you deem to be valuable. You might answer, for example: “To buy soda.” This answer makes sense, for soda is a nice thing and you can get it at the convenience store. I might further inquire, however: “What is buying the soda good for?” This further question can also be a reasonable one, for it need not be obvious why you want the soda. You might answer: “Well, I want it for the pleasure of drinking it.” If I then proceed by asking “But what is the pleasure of drinking the soda good for?” the discussion is likely to reach an awkward end. **The reason is that the pleasure is not good for anything further; it is simply that for which going to the convenience store and buying the soda is good**. 3 As Aristotle observes: “**We never ask** [a man] **what** his **end is in being pleased, because we assume that pleasure is choice worthy in itself**.”4 Presumably, a similar story can be told in the case of pains, for if someone says “This is painful!” we never respond by asking: “And why is that a problem?” We take for granted that **if something is painful, we have a sufficient explanation of why it is bad**. If we are onto something in our everyday reasoning about values, it seems that **pleasure and pain are both places where we reach the end of the line in matters of value**. Although **pleasure and pain thus seem to be good candidates for intrinsic value and disvalue**, several objections have been raised against this suggestion: (1) that pleasure and pain have instrumental but not intrinsic value/disvalue; (2) that pleasure and pain gain their value/disvalue derivatively, in virtue of satisfying/frustrating our desires; (3) that there is a subset of pleasures that are not intrinsically valuable (so-called “evil pleasures”) and a subset of pains that are not intrinsically disvaluable (so-called “noble pains”), and (4) that pain asymbolia, masochism, and practices such as wiggling a loose tooth render it implausible that pain is intrinsically disvaluable. I shall argue that these objections fail. Though it is, of course, an open question whether other objections to P1 might be more successful, I shall assume that if (1)–(4) fail, we are justified in believing that P1 is true itself a paragon of freedom—there will always be some agents able to interfere substantially with one’s choices. The effective level of protection one enjoys, and hence one’s actual degree of freedom, will vary according to multiple factors: how powerful one is, how powerful individuals in one’s vicinity are, how frequent police patrols are, and so on. Now, we saw above that what makes a slave unfree on Pettit’s view is the fact that his master has the power to interfere arbitrarily with his choices; in other words, what makes the slave unfree is the power relation that obtains between his master and him. The difﬁculty is that, in light of the facts I just mentioned, there is no reason to think that this power relation will be unique. A similar relation could obtain between the master and someone other than the slave: absent perfect state control, the master may very well have enough power to interfere in the lives of countless individuals. Yet it would be wrong to infer that these individuals lack freedom in the way the slave does; if they lack anything, it seems to be security. A problematic power relation can also obtain between the slave and someone other than the master, since there may be citizens who are more powerful than the master and who can therefore interfere with the slave’s choices at their discretion. Once again, it would be wrong to infer that these individuals make the slave unfree in the same way that the master does. Something appears to be missing from Pettit’s view. If I live in a particularly nasty part of town, then it may turn out that, when all the relevant factors are taken into account, I am just as vulnerable to outside interference as are the slaves in the royal palace, yet it does not follow that our conditions are equivalent from the point of view of freedom. As a matter of fact, we may be equally vulnerable to outside interference, but as a matter of right, our standings could not be more different. I have legal recourse against anyone who interferes with my freedom; the recourse may not be very effective—presumably it is not, if my overall vulnerability to outside interference is comparable to that of a slave— but I still have full legal standing.68 By contrast, the slave lacks legal recourse against the interventions of one speciﬁc individual: his master. It is that fact, on a Kantian view—a fact about the legal relation in which a slave stands to his master—that sets slaves apart from freemen. The point may appear trivial, but it does get something right: whereas one cannot identify a power relation that obtains uniquely between a slave and his master, the legal relation between them is undeniably unique. A master’s right to interfere with respect to his slave does not extend to freemen, regardless of how vulnerable they might be as a matter of fact, and citizens other than the master do not have the right to order the slave around, regardless of how powerful they might be. This suggests that Kant is correct in thinking that the ideal of freedom is essentially linked to a person’s having full legal standing. More speciﬁcally, he is correct in holding that the importance of rights is not exhausted by their contribution to the level of protection that an individual enjoys, as it must be on an instrumental view like Pettit’s. Although it does matter that rights be enforced with reasonable effectiveness, the sheer fact that one has adequate legal rights is essential to one’s standing as a free citizen. In this respect, Kant stays faithful to the idea that freedom is primarily a matter of standing—a standing that the freeman has and that the slave lacks. Pettit himself frequently insists on the idea, but he fails to do it justice when he claims that freedom is simply a matter of being adequately (and reliably) shielded against the strength of others. As Kant recognizes, the standing of a free citizen is a more complex matter than that. One could perhaps worry that the idea of legal standing is something of a red herring here—that it must ultimately be reducible to a complex network of power relations and, hence, that the position I attribute to Kant differs only nominally from Pettit’s. That seems to me doubtful. Viewing legal standing as essential to freedom makes sense only if our conception of the former includes conceptions of what constitutes a fully adequate scheme of legal rights, appropriate legal recourse, justiﬁed punishment, and so on. Only if one believes that these notions all boil down to power relations will Kant’s position appear similar to Pettit’s. On any other view—and certainly that includes most views recently defended by philosophers—the notion of legal standing will outstrip the power relations that ground Pettit’s theory.

#### [2] Extinction is bad and outweighs

MacAskill 14 [William, Oxford Philosopher and youngest tenured philosopher in the world, Normative Uncertainty, 2014]

The human race might go extinct from a number of causes: asteroids, supervolcanoes, runaway climate change, pandemics, nuclear war, and the development and use of dangerous new technologies such as synthetic biology, all pose risks (even if very small) to the continued survival of the human race.184 And different moral views give opposing answers to question of whether this would be a good or a bad thing. It might seem obvious that human extinction would be a very bad thing, both because of the loss of potential future lives, and because of the loss of the scientific and artistic progress that we would make in the future. But the issue is at least unclear. The continuation of the human race would be a mixed bag: inevitably, it would involve both upsides and downsides. And if one regards it as much more important to avoid bad things happening than to promote good things happening then one could plausibly regard human extinction as a good thing.For example, one might regard the prevention of bads as being in general more important that the promotion of goods, as defended historically by G. E. Moore,185 and more recently by Thomas Hurka.186 One could weight the prevention of suffering as being much more important that the promotion of happiness. Or one could weight the prevention of objective bads, such as war and genocide, as being much more important than the promotion of objective goods, such as scientific and artistic progress. If the human race continues its future will inevitably involve suffering as well as happiness, and objective bads as well as objective goods. So, if one weights the bads sufficiently heavily against the goods, or if one is sufficiently pessimistic about humanity’s ability to achieve good outcomes, then one will regard human extinction as a good thing.187 However, even if we believe in a moral view according to which human extinction would be a good thing, we still have strong reason to prevent near-term human extinction. To see this, we must note three points. First, we should note that the extinction of the human race is an extremely high stakes moral issue. Humanity could be around for a very long time: if humans survive as long as the median mammal species, we will last another two million years. On this estimate, the number of humans in existence in the The future, given that we don’t go extinct any time soon, would be 2×10^14. So if it is good to bring new people into existence, then it’s very good to prevent human extinction. Second, human extinction is by its nature an irreversible scenario. If we continue to exist, then we always have the option of letting ourselves go extinct in the future (or, perhaps more realistically, of considerably reducing population size). But if we go extinct, then we can’t magically bring ourselves back into existence at a later date. Third, we should expect ourselves to progress, morally, over the next few centuries, as we have progressed in the past. So we should expect that in a few centuries’ time we will have better evidence about how to evaluate human extinction than we currently have. Given these three factors, it would be better to prevent the near-term extinction of the human race, even if we thought that the extinction of the human race would actually be a very good thing. To make this concrete, I’ll give the following simple but illustrative model. Suppose that we have 0.8 credence that it is a bad thing to produce new people, and 0.2 certain that it’s a good thing to produce new people; and the degree to which it is good to produce new people, if it is good, is the same as the degree to which it is bad to produce new people, if it is bad. That is, I’m supposing, for simplicity, that we know that one new life has one unit of value; we just don’t know whether that unit is positive or negative. And let’s use our estimate of 2×10^14 people who would exist in the future, if we avoid near-term human extinction. Given our stipulated credences, the expected benefit of letting the human race go extinct now would be (.8-.2)×(2×10^14) = 1.2×(10^14). Suppose that, if we let the human race continue and did research for 300 years, we would know for certain whether or not additional people are of positive or negative value. If so, then with the credences above we should think it 80% likely that we will find out that it is a bad thing to produce new people, and 20% likely that we will find out that it’s a good thing to produce new people. So there’s an 80% chance of a loss of 3×(10^10) (because of the delay of letting the human race go extinct), the expected value of which is 2.4×(10^10). But there’s also a 20% chance of a gain of 2×(10^14), the expected value of which is 4×(10^13). That is, in expected value terms, the cost of waiting for a few hundred years is vanishingly small compared with the benefit of keeping one’s options open while one gains new information.

#### Prefer –

#### [1] Actor Specificity – Util is the best in the context of governments which is the actor in the resolution

#### A] Governments must aggregate since every policy benefits some and harms others, which also means side constraints freeze action.

#### B] No intent-foresight distinction – the actions we take are inevitably informed by predictions from certain mental states, meaning consequences are a collective part of the will.

#### C] No act-omission distinction governments are responsible for everything in the public sphere so inaction is an implicit authorization of action

#### D] Actor-specificity comes first since different agents have different ethical standings. Takes out util calc indicts since they’re empirically denied and link turns them because the alt would be no action

### 1AC – UV

#### [1] 1ar theory since the neg can do infinite bad things and I can’t check. It’s drop the debater since the 1ar is too short to win both layers. No RVI since they’d dump on it for 6 minutes. CI since reasonability is arbitrary and bites intervention.

#### [2] Permissibility and presumption substantively affirm: a) Statements are true before false since if I told you my name, you’d believe me b) Epistemics – we wouldn’t be able to start a strand of reasoning since we’d have to question that reason. c) If anything is permissible, then definitionally so is the aff since there is nothing that prevents us from doing it