

**I affirm the resolved: The appropriation of outer space by private entities is unjust**

## **Definitions:**

### **Appropriation:**

Merriam Webster

the act of taking or using something especially in a way that is illegal, unfair, etc.

### **Private entities:**

In general Except as otherwise provided in this paragraph, the term “private entity” means **any person or private group, organization, proprietorship, partnership, trust, cooperative, corporation, or other commercial or nonprofit entity**, including an officer, employee, or agent thereof.

### **Unjust:**

Cambridge dictionary

**not fair**

**My value is Justice as stated by the resolution**

**As stated by Cornell 20,**

<https://www.law.cornell.edu/wex/justice>

**[Justice is] The ethical, philosophical idea that people are to be treated impartially, fairly, properly, and reasonably by the law and by arbiters of the law, that laws are to ensure that no harm befalls another, and that, where harm is alleged, both the accuser and the accused receive a morally right consequence merited by their actions**

## My value Criterion is Saving Lives

### 1. Lives are the basis for human values

Weiwei, Ai, January 2019, <https://www.theguardian.com/commentisfree/2019/jan/01/human-dignity-danger-ai-weiwei>

**[Lives are]** If we truly believe in values that we can all identify with and aspire to – **a recognition of truth, an understanding of science, an appreciation of the self, a respect for life and** a faith in society – then we need to eliminate obstacles to understanding, uphold the fundamental definition of humanity, affirm **the shared value of human lives** and other lives, and acknowledge the symbiotic interdependency of human beings and the environment. A belief in ourselves and a belief in others, a trust in humanitarianism's power to do good, and **an earnest recognition of the value of life – these form the foundation for all human values and all human efforts.**

### 2. Extinction outweighs everything- having human life is a prerequisite to achieving any other framework. Without humans existing, nothing can be accomplished or furthered.

## Contention 1: Space War

### Asteroid mining leads to resource war

Joelle **Renstrom** December 9, **2015** <https://www.wbur.org/cognoscenti/2015/12/09/asteroid-mining-joelle-renstrom>

Planetary Resources might be the first asteroid mining company, but it won't be the last. Once the technology and resources are in place, other **companies from the U.S. and elsewhere will join** them **in the hunt for** viable, **resource-rich asteroids**. **And then what?** Earth has a history of oil crises, embargoes and conflicts. What's to prevent similar clashes from arising in space? Perhaps enough asteroids exist to keep companies from various countries out of each other's way if they can't share. But the situation could get tricky, especially because the **asteroids themselves** would **remain sovereign territory, as dictated by the 1967 Outer Space Treaty**. The new law makes clear its consistency with this Treaty: "the United States does not thereby assert sovereignty or sovereign or exclusive rights or jurisdiction over, or the ownership of, any celestial body." **So no one would own the asteroids, but people would own the spoils. Would other countries recognize that? Would we recognize it if a Chinese or Russian company found a stockpile of platinum on an asteroid?** Would asteroid mining become a first-come, first-served proposition? The Asteroid Resources Property Act also paves the way for resource exploitation on planets, such as Mars. One of the primary arguments made for colonizing the Red Planet is its resources. Mars Society founder and colonization advocate Robert Zubrin argues that Mars "is endowed with all the resources needed to support not only life but the actual development of a technological civilization." **These resources include water, carbon, nitrogen, hydrogen, oxygen and deuterium, a rare (on Earth) and valuable hydrogen isotope used to make rocket fuel.** As such endeavors become more feasible, their implications raise some slippery-slope fears -- namely, that in addition to lifeless asteroids, **planets with the potential for microbial life such as Mars may become competitive mining stations.**

**also,**

Antony **Funnel** Aug 23, **2018** <https://www.abc.net.au/news/2018-08-24/conflict-in-space-is-inevitable-expert-warns/10146314>

A leading Australian space law expert has warned **conflict over space assets is "inevitable"**, and more needs to be done now to avert the potential for hostility. **Professor Melissa de Zwart, the Dean of Law at the University of Adelaide, says growing commercial interest in the mining of precious minerals on asteroids and planets has heightened the danger.** "I think you have to be a realist about that," she said. **"Where you have resources, where you have competition for those resources, where you have investment of money in the**

extraction of those resources ... there will be an expectation of security around that investment."

## **Asteroids profits are no joke**

Clive **Thompson** 1/14/**2016** <https://www.wired.com/2016/01/clive-thompson-11/>

SPACE IS LOUSY with profits. Consider the asteroid **Ryugu: It's made of so many tons of nickel, iron, cobalt, and water, it's worth an estimated \$95 billion.** Venture into deeper space and there's even richer plunder---like **David, an asteroid** that the wanna-be space mining company Planetary Resources **values at more than \$100 trillion. That's more than five times the GDP of the US.**

## **Public Bodies are already becoming involved in private appropriation**

Joey **Roulette**. . NASA sets out to buy moon resources mined by private companies. [source]. 9-11-**2020**  
<https://www.reuters.com/article/space-exploration-moon-nasa/nasa-sets-out-to-buy-moon-resources-mined-by-private-companies-idUSKBN26208A>

WASHINGTON (Reuters) - **NASA** on Thursday **launched an effort to pay companies to mine resources on the moon, announcing it would buy from them rocks, dirt and other lunar materials as the U.S. space agency seeks to spur private extraction of coveted off-world resources for its use.** NASA Administrator Jim Bridenstine wrote in a blog post accompanying the announcement that **the plans would not violate a 1967 treaty that holds that celestial bodies and space are exempt from national claims of ownership.** The initiative, **targeting companies that plan to send robots to mine lunar resources, is part of NASA's goal of setting what Bridenstine called "norms of behavior"** in space and allowing private mining on the moon in ways that could help sustain future astronaut missions. NASA said it views the mined resources as the property of the company, and the materials would become "the sole property of NASA" after purchase. Under NASA's Artemis program, President Donald Trump's administration envisions a return of American astronauts to the moon by 2024. NASA has cast such as mission as a precursor to a future first human voyage to Mars. "The bottom line is we are going to buy some lunar soil for the purpose of it demonstrating that it can be done," Bridenstine said during an event hosted by the Secure World Foundation, a space policy organization.

## **Private Entities have made Space Militarization possible**

Patrick A. **Salin** February **2001** <https://sci-hub.se/https://www.sciencedirect.com/science/article/abs/pii/S0265964600000503>

**We may consider that outer space should no longer be considered as a sanctuary safe from military operations** as of 19 June 1999. On that day, a US Theater HighAltitude Area Defense (THAAD) rocket hit a target missile outside the Earth's atmosphere. Outer space is now undergoing a militarization process that is developing within a totally new framework, that of the privatization of space ventures and projects. The bipolar Cold War stage has been removed and gone is the threatening vision of nuclear warfare via all sorts of Earth-based and spaceborne weapons. Yet the big industrial concerns that manufactured the weapons of the Cold War have simply converted themselves and regrouped into mammoth civilian manufacturers, deploying constellations of civilian assets in outer space.<sup>2</sup> Instead of procuring the much-criticized US Strategic Defense Initiative (SDI), they now produce dual-use goods that can be used in an undifferentiated manner for both civilian and military objectives [3,4]<sup>3</sup>. **The borderlines between civilian and military high technology goods that prevailed only a few years ago have become meaningless and technical parameters that qualified equipment as being military, less than "five years ago, are now useless, commercial entities being able to sell these, once forbidden tools, as plain commercial gadgets.** The confusion between the US Department of Commerce and the US Department of State over determining what is (or should be) subject to authorization and what is not is illustrative of this situation. **Yet, thanks to the loopholes and inconsistencies of the international treaties on outer space, we may soon end up with exactly the same result as during the Cold War \* Hollywood's Star Wars, live! We are slowly discovering that the militarization process of outer space seems to be a given, thanks to increasing competition within the space business environment.** And, **as privatization has accelerated during the last decade, we can clearly see an acceleration of the militarization process of outer space. This has**

**become apparent through two main observations: (1) private space corporations are**, more than ever, **vanguards of national interests; and (2) commercial competition is another way for nations to impose their influence in space (and world) affairs.** In the end, what is at stake here is the fragile equilibrium between world peace and tensions, now transported into outer space

## **Commercial satellites have sparked nuclear interests and militarization of space**

Nathan **Strout**, July 20, **2019**

**The rapid growth of commercial space makes the use of non-government satellites for nuclear command and control increasingly tempting,** according to one official.

During a speech June 26, **Air Force Chief of Staff Gen. David Goldfein said** that the service — which oversees both **the United States'** ground-based intercontinental ballistic missiles, as well as strategic bombers capable of delivering nuclear warheads — **was open to the idea of using private sector satellites.** “Whether it’s Silicon Valley or commercial space, there’s unlimited opportunities ahead right now for us in terms of how we think differently on things like nuclear command and control,” said Goldfein. “I, for one, am pretty excited about it.” **The military has increasingly turned to the commercial sector to expand its capabilities more cost efficiently.** For instance, **the National Reconnaissance Office** — the agency in charge of the nation’s spy satellites — **announced that it was looking to expand the amount of satellite imagery it buys from commercial companies. The Air Force has also expressed interest in developing a hybrid architecture for satellite communications,** which would see war fighters able to switch between commercial and military satellites as they move through coverage areas. The National Reconnaissance Office is dipping its toe into the world of commercial data, awarding three study contracts that will put it on track to start purchasing commercial satellite imagery. According to Goldfein, there’s no reason that commercial capabilities could not similarly be applied to nuclear C2.

## **Militarization of Space breeds distrust and war**

Alexandra **Gilliard**, June 10, **2019**, <https://globalsecurityreview.com/consequences-militarization-space/>

Only so many states currently have access to space—which means **any militarization** be by the few, while other states would be left to fend for themselves. This **would establish a clear power imbalance that could breed distrust among nations, resulting in a more insecure world and a veritable power keg primed for war. Additionally, deterrence measures taken by states with access to space would escalate, attempting to build up weapons caches not dissimilar to the nuclear weapons stockpiling activities of the Cold War. In any arms race, it is inevitable that more advanced weaponry is created.** Yet, this does not only pose a risk to assets in space. Should a terrestrial war break out, this weaponry may eventually be deployed on the ground, and **space-faring states would be able to capitalize on the power imbalance by using these new developments against states that have not yet broken into the space industry or developed equally-advanced weaponry. The militarization of space would inevitably increase the chances of war,** and also threaten the industries that rely on space to carry out their daily operations. Without treaties and resolutions to regulate and limit armament in space, the international community risks facing extreme consequences. Furthermore, **with the history of U.S. disinterest in UN efforts to regulate space, the implementation of a meaningful, multilateral agreement for arms control in space is unlikely.**

## Space War is Bad

THOMAS **GONZÁLEZ** ROBERTS CAROLINE **KITCHENER** DECEMBER 13, **2017**  
<https://www.theatlantic.com/membership/archive/2017/12/why-we-should-be-worried-about-a-war-in-space/548333/>

While agreements for how to operate in other international domains, like the open sea, airspace, and even cyberspace, have already been established, the major space powers—the United States, Russia, and China—have not agreed upon a rulebook outlining what constitutes bad behavior in space. It's presumed that International Humanitarian Law would apply in outer space—protecting the civilian astronauts aboard the International Space Station—but it's unclear whether damaging civilian satellites or the space environment itself is covered under the agreement. With only a limited history of dangerous behavior to study, and few, outdated guidelines in place, a war in space would be a war with potentially more consequences, but far fewer rules, than one on Earth. Although there has never been a military conflict in space, the history of human activity above our atmosphere is not entirely benign. In 1962, the United States detonated a 1.4 megaton nuclear weapon 250 miles above the Earth's surface. The blast destroyed approximately one third of satellites in orbit and poisoned the most used region of space with radiation that lasted for years. Although the United States, Russia, and others soon agreed to a treaty to prevent another nuclear test in space, China and North Korea never signed it. In 2007, China tested an anti-satellite weapon, a conventionally-armed missile designed to target and destroy a satellite in orbit. In the process, it annihilated an old Chinese weather satellite and created high-velocity shrapnel that still threatens other satellites. Even though demonstrations like this have consequences for everyone, countries are free to carry them out as they see fit. No treaties address this kind of test, the creation of space debris, or the endangerment of other satellites.

## Space war leads to nuclear war

Laura **Grego** July 7, **2015** <https://allthingsnuclear.org/lgrego/preventing-space-war/>  
The Pentagon has known that space could be a flash point at least since the late 1990s when it began including satellites and space weapons in earnest as part of its wargames. The early games revealed some surprises. For example, attacking an adversary's ground-based anti-satellite weapons before they were used could be the "trip wire" that starts a war: in the one of the first war games, an attack on an enemy's ground-based lasers was meant to defuse a potential conflict and protect space assets, but instead was interpreted as an act of war and initiated hostilities. The games also revealed that disrupting space-based communication and information flow or "blinding" could rapidly escalate a war, eventually leading to nuclear weapon exchange.

The war games have continued over the years with increased sophistication, but continue to find that conflicts can rapidly escalate and become global when space weapons are involved, and that even minor opponents can create big problems. The report back from the 2012 game, which included NATO partners, said these insights have become "virtually axiomatic." Participants in the most recent Schriever war games found that when space weapons were introduced in a regional crisis, it escalated quickly and was difficult to stop from spreading. The compressed timelines, the global as well as dual-use nature of space assets, the difficulty of attribution and seeing what is happening, and the inherent vulnerability of satellites all contribute to this problem.

## Contention 2: Rocket Launches are bad

### Companies planning many more launches

Michael **Sheetz and** Magdalena **Petrova** December 15, **2019**  
<https://www.cnbc.com/2019/12/14/spacex-oneweb-and-amazon-to-launch-thousands-more-satellites-in-2020s.html>

While **SpaceX** makes up the lion's share of these plans, together with **OneWeb, Telesat and Amazon's Project Kuiper**, the four companies **have announced the intention to launch as many as 46,100 satellites in the next few years. That's more than five times the amount of objects sent to space in the past 60 years, which numbers just shy of 9,000** according to the United Nations Office for Outer Space Affairs.

## **Contribute to Climate Change and Ozone depletion**

J.A. **Dallas et al.**: "The environmental impact of emissions from space launches: A comprehensive review," Journal of Cleaner Production **(2020)**  
<https://www.journals.elsevier.com/journal-of-cleaner-production/news/environmental-impact-of-rocket-launches-must-be-taken-seriou>  
**Dallas and her colleagues reviewed more than 40 studies that considered a range of rocket and propellant types, and the resulting impacts on climate, stratospheric ozone, ecosystems and human health.**

While the effects of different rocket and propellant types varied, **all had the potential to cause stratospheric ozone depletion. Ozone in the stratosphere forms a layer that prevents the sun's damaging ultraviolet rays from reaching the surface.**

The discovery of a hole in the ozone layer caused by refrigerant chemicals in 1982 caused a ban on these chemicals, so anything that may cause renewed ozone depletion is of global concern. **Rocket launches are the only source of ozone-depleting chemicals that are deposited directly into the stratosphere, meaning increased numbers of launches could cause significant damage.**

As well as stratospheric ozone, **launch emissions have the potential to impact climate change through the release of black carbon into the stratosphere. They also can impact ecosystem and human health through the release of toxic chemicals that can enter surface waters and persist in the soil.**

## **Space X's Falcon 9 shows Private Companies show a disregard for pollution and want more launches and a cheaper price**

Ian **Whittaker** September 7, **2018** <https://www.smithsonianmag.com/science-nature/spacex-environmentally-responsible-180968098/>

So what could possibly be wrong with this groundbreaking test flight? **While visually appealing, cheaper and a major technological advancement, what about the environmental impact?** The rocket is reusable, which means cutting down the resources required for the metal body of the rocket. However, **the mass of most rockets are more than 95% fuel. Building bigger rockets with bigger payloads means more fuel** is used for each launch. **The current fuel for Falcon Heavy is RP-1** (a refined kerosene) and liquid oxygen, **which creates a lot of carbon dioxide when burnt. The amount of kerosene in three Falcon 9 rockets is roughly 440 tonnes and RP-1 has a 34 percent carbon content.** This amount of carbon is a drop in the ocean compared to global industrial emissions as a whole, but **if the SpaceX's plan for a rocket launch every two weeks comes to fruition, this amount of carbon (approximately 4,000 tonnes per year) will rapidly become a bigger problem.**

## Climate change means Extinction

**Science Daily 18** ScienceDaily, 11-29-2018, "Climate change risks 'extinction domino effect': Loss of animal or plant species to climate change causes global 'extinction domino effect'," <https://www.sciencedaily.com/releases/2018/11/181129122506.htm>

New research reveals the extinction of plant or animal species from extreme environmental change increases the risk of an 'extinction domino effect' that could annihilate all life on Earth. This would be the worst-case scenario of what scientists call 'co-extinctions', where an organism dies out because it depends on another doomed species, with the findings published today in the journal *Scientific Reports*. Think of a plant's flower pollinated by only one species of bee -- if the bee becomes extinct, so too will the plant eventually.

"But because all species are connected in the web of life, our paper demonstrates that even the most tolerant species ultimately succumb to extinction when the less-tolerant species on which they depend disappear." "Failing to take into account these co-extinctions <sup>therefore</sup> underestimates the rate and magnitude of the loss of entire species from events like climate change by up to 10 times," says co-author Professor Bradshaw of Flinders University in South Australia Professor Bradshaw and Dr Strona say that their virtual scenarios warn humanity not to underestimate the impact of co-extinctions.

Another really important discovery was that in the case of global warming in particular, the combination of intolerance to heat combined with co-extinctions mean that 5-6 degrees of average warming globally is enough to wipe out most life on the planet." says Dr Strona. Professor Bradshaw further warns that their work shows how climate warming creates extinction cascades in the worst possible way, when compared to random extinctions or even from the stresses arising from nuclear winter.