# **ADVANTAGE 1: SPACE WAR**

**SUBPOINT A: DEBRIS**

**NewSpace actors will trigger security tensions – countries can’t distinguish between accidental and purposeful collisions**

**Stockwell 20**. Samuel Stockwell. “Legal ‘Black Holes’ in Outer Space: The Regulation of Private Space Companies.” E-International Relations. Jul 20, 2020.<https://www.e-ir.info/2020/07/20/legal-black-holes-in-outer-space-the-regulation-of-private-space-companies/>

Space debris can be defined as non-purposeful man-made objects that reside in space; made up of inactive parts from former space operations and fragmentations of spacecraft, there are nearly 30,000 pieces of debris in the Earth’s orbit (Pellegrino & Stang, 2016: 25). Despite most debris being centimetres or millimetres in size satellites often travel at the speed of a bullet, meaning that a collision between the two could be catastrophic in terms of environmental, mechanical and financial damage (Black & Butt, 2010: 1). Since the development of the Kessler Syndrome thesis in 1978 – which predicted that **space debris may** become so dense as to **trigger a chain reaction of major collisions** **– space debris is** considered more of **a threat to security** operations **in the near-term** than military space activity (Quintana, 2017: 95). **Difficulty** over **determining whether a collision was accidental or** a **purposeful** act further exacerbates this problem, given that “every object in orbit is a threat to everything else in orbit, regardless of its intended function” (Faith, 2012: 86). Such developments have led to the US administration increasingly adopting a securitisation discourse around orbital debris (Bowen, 2014: 47), which may cause concerns as to whether policymakers may react to future American satellite collisions in a militarised manner. A number of **NewSpace actors are likely to complicate these worries** even **further** through recent satellite proposals. Whilst **Boeing is proposing** a constellation of up to **3,000 satellites, SpaceX has** even grander **goals of** creating a constellation consisting of 4,425 satellites, eventually **expanding to 12,000 satellites** in the near-future (Kosiak, 2019: 7). Putting this into context, there are currently just around 1,400 active satellites in orbit around the Earth, highlighting the scale of these projects. The collision between a single US privately-owned Iridium satellite and state-owned Russian Cosmos satellite in 2009 underscored not only the sheer amount of debris caused by these collisions – over 1,500 pieces – but also foreshadowed the possible geopolitical tensions that may arise from them (Wang, 2010: 87-88). Given the number of various commercial satellite constellations possibly going into orbit in the near-future, this raises questions over the possibly devastating security hazards they could pose once in orbit or when they eventually become defunct.

**Space conflict goes nuclear – misperceptions and lack of established norms**

**Skibba 20**. Ramin Skibba - a writer based in San Diego. His work has appeared in Undark magazine, New Scientist, and Nature. “The Ripple Effects of a Space Skirmish.” The Atlantic. July 12, 2020.<https://www.theatlantic.com/technology/archive/2020/07/space-warfare-unregulated/614059/>

So far, there are relatively few international policies or norms about what’s allowed in modern-day space and what’s not. The SWF report notes that **a**n incident or **misunderstanding** **could escalate tensions** if it’s perceived as an attack. The lack of guidance has left room for a range of activities. Weeden said that in December 2019, the Trump administration signaled its intention to strengthen the United States’ space weaponry and protect its spacecraft from possible attacks by Russia and China by transforming the Air Force Space Command into the U.S. Space Force. That shift “brought a full-time operational focus to the space domain, which was a needed change,” wrote Lieutenant Colonel Christina Hoggatt, a Space Force spokesperson, in a statement to Undark. With these forces, the Defense Department seeks to “strengthen deterrence” and improve capabilities to “defend our vital assets in space,” she wrote. This emphasis, Burbach said, likely means that the U.S. military will focus on making satellites more resilient to attack, rather than developing offensive weapons. Compared with the U.S., smaller space powers have fewer satellites and therefore less to lose, the U.N.’s Porras said. He argues that tense regional relationships could be particularly unpredictable. For example, he said, **if North Korean leaders found themselves in a standoff with South Korea and the U.S., they might** launch and **detonate a nuclear weapon in space;** its dangerous radiation would disable most satellites. The U.N. and other international groups—including SWF and the Outer Space Institute, a global research organization based in British Columbia—are working to avoid such scenarios. Weeden said that as long as countries don’t launch destructive space weapons near other countries’ spacecraft, conduct overtly provocative tests, or disable critical satellites, peaceful space activities should continue. For now, he points out, countries have only tested missiles on their own defunct satellites, and exercises against other nations’ spacecraft have remained nondestructive. Existing international laws offer little guidance for modern military technology in space. While these **rules**—including the Partial Nuclear Test Ban Treaty of 1963 and the U.N.’s Outer Space Treaty of 1967—prohibit weapons of mass destruction in space, they **don’t explicitly limit** other kinds of **space weapons, tests, or military space forces**. Weeden points out that space diplomats could create new guidelines by developing something like the Incidents at Sea agreement, which the U.S. and the Soviet Union signed during the Cold War to maintain safe distances between ships and avoid maneuvers in heavy traffic. But until similar rules involving space weaponry are hammered out, he said, unexpected satellite tests will inevitably fuel speculation and paranoia. “Any time you have **militaries operating near each other without a lot of transparency** or clarity,” he added, “you always have the opportunity for misperceptions that **could lead to something very bad**.”

#### **Even limited nuclear war causes extinction**

**Starr 14**—Steven, Senior Scientist for Physicians for Social Responsibility, Director of the Clinical Laboratory Science Program (Missouri), commentator in the Bulletin of the Atomic Scientists and the Strategic Arms Reduction, Associate member of the Nuclear Age Peace Foundation, “The Lethality of Nuclear Weapons: Nuclear War has No Winner,” Global Research: Centre for Research on Globalization, 6/5, <http://www.globalresearch.ca/the-lethality-of-nuclear-weapons-nuclear-war-has-no-winner/5385611>

Nuclear war has no winner. Beginning in 2006, several of the world’s leading climatologists (at Rutgers, UCLA, John

Hopkins University, and the University of Colorado-Boulder) published a series of studies that evaluated the long-term environmental consequences of a nuclear war, including baseline scenarios fought with merely 1% of the explosive power in the US and/or Russian launch-ready nuclear arsenals. They concluded that the consequences of **even a “small” nuclear war would** include catastrophic **disrupt**ions of **global climate**[i] and massive destruction of Earth’s protective ozone layer[ii]. These and more recent studies predict that global agriculture

would be so negatively affected by such a war, **a global famine would result, which would cause up to 2 billion people to starve to death.** [iii]¶ These **peer-reviewed studies** – which were analyzed by the best scientists in the world and found to be without error – also **predict** that **a war** fought with less than half of US or Russian strategic nuclear weapons **would destroy the human race**.[iv] In other words, a US-Russian nuclear war would create such extreme long-term damage to the global environment that it would leave the Earth uninhabitable for humans and most animal forms of life.¶ A recent article in the Bulletin of the Atomic Scientists, “Self-assured destruction: The climate impacts of nuclear war”,[v] begins by stating:¶ “A nuclear war between Russia and the United States, even after the arsenal reductions planned under New START, could produce a nuclear winter. Hence, an attack by either side could be suicidal, resulting in self-assured destruction.”¶ In 2009, I wrote an article[vi] for the International Commission on Nuclear Non-proliferation and Disarmament that summarizes the findings of these studies. It explains that **nuclear firestorms would produce millions of tons of smoke, which would** rise above cloud level and **form a** global stratospheric **smoke layer that would** rapidly **encircle the Earth**. The smoke layer would remain for at least a decade, and **it would** act to destroy the protective ozone layer (vastly increasing the UV-B reaching Earth[vii]) as well as **block warming sunlight**, thus **creating** Ice Age weather **conditions that would last 10 years** or longer.¶ Following a US-Russian nuclear war, temperatures in the central US and Eurasia would fall below freezing every day for one to three years; the **intense cold would** completely **eliminate growing seasons** for a decade or longer. No crops could be grown, leading to a famine that would kill most humans and large animal populations.¶ Electromagnetic pulse from high-altitude nuclear detonations would destroy the integrated circuits in all modern electronic devices[viii], including those in commercial nuclear power plants. Every nuclear reactor would almost instantly meltdown; every nuclear spent fuel pool (which contain many times more radioactivity than found in the reactors) would boil-off, releasing vast amounts of long-lived radioactivity. **The fallout would make most of the US and Europe uninhabitable**. Of course, the **survivors** of the nuclear war **would** be **starv**ing **to death** anyway. Once nuclear weapons were introduced into a US-Russian conflict, there would be little chance that a nuclear holocaust could be avoided. Theories of “limited nuclear war” and “nuclear de-escalation” are unrealistic.[ix] In 2002 the Bush administration modified US strategic doctrine from a retaliatory role to permit preemptive nuclear attack; in 2010, the Obama administration made only incremental and miniscule changes to this doctrine, leaving it essentially unchanged. Furthermore, Counterforce doctrine – used by both the US and Russian military – emphasizes the need for preemptive strikes once nuclear war begins. Both sides would be under immense pressure to launch a preemptive nuclear first-strike once military hostilities had commenced, especially if nuclear weapons had already been used on the battlefield.

**The aff solves – restricting the appropriation of outer space decreases private companies’ activity in space**

**Babcock, 15** -- Jonathan’s practice involves assisting clients in a range of national security matters, including economic sanctions compliance, export controls compliance, and national security reviews before the Committee on Foreign Investment in the United States (CFIUS). Prior to joining Morrison & Foerster, Jonathan practiced in the International Trade and National Security practice groups of a major D.C. law firm.

[Jonathan Babcock, "The Space Review: Encouraging private investment in space: does the current space law regime have to be changed? (part 1)," The Space Review, 1-5-2015, https://www.thespacereview.com/article/2669/1, accessed 6-25-2021]

**Space law,** derived mainly from the Outer Space Treaty and the Moon Treaty (the latter’s principles carry weight despite having a few signatory states), **prohibits national appropriation in space** and states that space is a domain for the “common heritage of mankind.” The **meaning** of these documents, particularly pertaining to their applicability to private actors in space, **is ambiguous** and contentious, as will be shown in the following section. **In any industry, legal uncertainty hinders private investment**. Accordingly, **a cloudy legal regime** in space **has hampered the ability of** private individuals and **firms to raise** the **capital** necessary **to fund space activities.**16 Moreover, private actors hold that the absence of a legal regime clearly defining the scope of property rights in space deprives them of the assurance that they will reap benefits that will outweigh the capital they invested.17 They argue that the main impediment to further private action in space is that the current legal regime jeopardizes the ability of private actors to make a profit in space. **This** is a discouraging climate for private innovation, and **will** surely **discourage future investment in space**. The legal regime governing space must be clarified, added to, altered, or changed entirely to encourage private investment in space by allowing actors to realize financial rewards.18 The question then becomes how to accomplish this. In order to better understand the inadequacies of the current legal regime, it is necessary to analyze what exactly the Outer Space Treaty and Moon Treaty state, and how they dictate the climate in which private actors are operating in space.

**Debris turns mining – it prevents exploration**

**Mccoustra, 20** -- ScotCHEM Chair in Chemical Physics, Heriot-Watt University

[Martin, "Space junk: Astronomers worry as private companies push ahead with satellite launches," Conversation, 5-13-20, https://theconversation.com/space-junk-astronomers-worry-as-private-companies-push-ahead-with-satellite-launches-137572, accessed 6-25-21]

Since the launch of Sputnik 1 in 1957, the lower orbit around the Earth has become an increasingly congested environment with more than 2,200 satellite launches to date. Those satellites – along with launch vehicle components and debris from mechanical disintegration, collisions and explosions – now fill this region with a “fog” of space debris. And it’s getting busier. In the last few weeks, SpaceX has launched 60 new satellites as part of its Starlink programme. This brings the total to currently around 400 Starlink satellites in low Earth orbit as part of a programme that aims to bring cheap, satellite-based internet access to everyone. Eventually, this programme could place nearly 12,000 satellites in orbit around the Earth. With Amazon, Canada’s Telesat and others planning satellite constellations of similar scale, low Earth orbit is becoming ever more crowded. The debris ranges in size from a few microns to many metres. Stuart Grey, an aerospace engineer at the University of Strathclyde, has produced a stunning visualisation that highlights the more than 20,000 objects over 10cm in size now orbiting the Earth (see video above). But there are many millions of particles 1mm in size and smaller. Closing our window on the universe? Amateur astronomers are already expressing concern over the increasing number of bright, moving objects in the night sky. But the worry is perhaps much greater for the professionals. **Crowding in low Earth orbit has inevitable consequences for** ground-based **astronomers**. Bright surfaces on satellites can reflect rays from the sun – giving rise to a burst of sunlight directed towards the surface of the Earth. Such intense bursts of light are much stronger than the weak light sources typically being observed by astronomers **and will impede observations of distant objects in space**. Billions have already been spent on existing optical telescopes, and many more billions will be poured into new platforms in the next decade, such as the European Extremely Large Telescope being built on the Atacama plateau in Chile. There is intense competition for observing time on such resources, so any potential threat from satellite reflections must be taken seriously as they may **mak[ing]** some of the **observations driving our understanding of the** evolution of the **universe impossible**. SpaceX has assured the public that Starlink will not contribute to this problem and says it has been taking steps to mitigate the impacts of its satellites on observational astronomy – even to the extent of testing whether a black coating on its satellites can reduce visibility, and adjusting some of the satellites’ orbits if necessary. With some 3% of its planned constellation launched, SpaceX is at least responding to the concerns raised by astronomers. Hopefully other agencies planning satellite constellation launches will also be upfront with their plans to reduce this serious problem to astronomical observation. But crowding in low Earth orbit also has consequences for satellites and other space vehicles, including those designed to carry humans. To achieve orbit, satellites seek a balance between their speed and the effect of Earth’s gravity on them. The speed with which a satellite must travel to achieve this balance depends on its altitude above Earth. The nearer to Earth, then the faster the required orbital speed. At an altitude of 124 miles (200km), the required orbital velocity is a little more than 17,000 miles per hour (about 7.4 km/s). Any object shed by a satellite or other vehicle in orbit will maintain the same orbital speed. Collisions between such objects can therefore occur at combined speeds of potentially up to 34,000 mph at 124 miles (if it is head-on). The effects of such impacts can be serious for astronauts and space stations – as the dramatic opening scenes of the 2013 movie Gravity depict. There is impact shielding on satellites and space vehicles which is designed to stop objects smaller than 1cm crashing into them. At best, the shielding will do so – though the electromagnetic impulse created may interfere with electronic systems. At worst, **larger pieces of space junk could penetrate** the **vehicles. This could result in internal damage and** disintegration that **threaten** the **safety** of the mission. Space agencies such as NASA and ESA have therefore established orbital debris research programmes to observe such debris and develop strategies to control its effects. There is little doubt that, with the increasing use and commercialisation of space, we boost the risk of catastrophic events associated with orbital debris. Agencies, both state and commercial, must recognise this and support efforts to reduce the likelihood of such events by taking steps to remove existing debris and reduce the potential for further debris by removing redundant satellites and other space vehicles. For example the RemoveDEBRIS satellite uses an on-board harpoon to capture junk. **Only when we resolve the problem of space junk will our** window on, and **pathway to, space be** truly **fully open.**

#### **Next is the warming advantage.**

#### **Rocket launches negatively impact the ecosystem and cause warming**

J.A.**Dallas et al.: 20** Australian Centre for Space Engineering Research, UNSW, Sydney, Australia School of Minerals and Energy Resources Engineering, UNSW, Sydney, Australia “[The environmental impact of emissions from space launches: A comprehensive review](https://www.sciencedirect.com/science/article/pii/S0959652620302560),” Journal of Cleaner Production (2020)

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.** Launch emissions can cause direct effects, from the combustion of the propellant, and indirect effects, from the mixing of ambient air into the exhaust plume, which can cause different reactions at different altitudes. The team discovered that the quantity and type of propellant used had the biggest effect on the nature and magnitude of the environmental impacts associated with space launches. While solid rocket boosters were the best studied, due to their use in NASA’s space shuttle programme, liquid propellants are now most commonly used, and require further study. “I’m excited about the prospects for humankind’s future in space and I want to ensure that future is a long one, brought about through sustainable space travel,” says Dallas .

#### **And, increased rocket launches cause warming – 2 warrants**

Joe **McCarthy**, 02-08-**18**, "The SpaceX Launch Was Actually Really Bad for the Environment," Global Citizen,<https://www.globalcitizen.org/fr/content/space-x-bad-for-the-environment/> Joe McCarthy is a Staff Writer at Global Citizen. He studied creative writing at Southern Connecticut State University and now writes about environmental issues and global events.

The astrophysicist Ian Whittaker [wrote](https://www.businessinsider.com.au/spacex-falcon-heavy-environmental-impact-space-junk-2018-2) that **the SpaceX rocket** that launched from the Kennedy Space Center on Merritt Island, Florida, on Wednesday burned a massive amount of fuel. The rocket **held 440 tons of jet fuel, which has a high carbon content**, meaning it releases a lot of carbon dioxide into the air when burned. If SpaceX meets its target of launching a rocket every two weeks, then the company will be releasing roughly 4,000 tons of carbon into the atmosphere each year, Whittaker calculated. That’s nothing compared to [annual carbon output](https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data) around the world, but **if more rocket companies come to market**, [as is expected](https://theconversation.com/private-companies-are-launching-a-new-space-race-heres-what-to-expect-80697), then **space travel could** rapidly **account for a major source of greenhouse gas emissions.** More pressing, Whittaker argues, is the problem of space debris. Just as the oceans are [becoming cesspools of plastic](https://www.globalcitizen.org/en/content/tornado-of-plastic-waste-ocean-indonesia/) **and** other garbage, outer space is becoming riddled with space debris. There are now around [150 million objects](https://phys.org/news/2017-04-space-debris-problem-worse-scientists.html) floating in space because of human-launched expeditions and experiments. All of this **debris can** interrupt and even **destroy critical satellite infrastructure that** perform functions like **measur**ing **climate change and enabl**ing **GPS**, Whittaker says, **and could** ultimately **make it harder for legitimate scientific expeditions** to take place.

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#### **Climate change leads to extinction in multiple ways**

**Pascus 19** Brian Pascus, 6-4-2019, "Human civilization faces "existential risk" by 2050 according to new Australian climate change report," CBS News, https://www.cbsnews.com/news/new-climate-change-report-human-civilization-at-risk-extinction-by-2050-new-australian-climate/

A new report by Australian climate experts warns that "climate change now represents a near- to mid-term existential threat" to human civilization. In this grim forecast — which was endorsed by the former chief of the Australian Defense Force — **human civilization could end by 2050 due to the** destabilizing societal and environmental factors caused by a **rapidly warming planet**. The report, entitled "Existential climate-related security risk: A scenario approach," lays out **a future** where **society could collapse due to instabil**ity set off by **migration patterns** of billions, of people affected by drought, rising sea levels, and environmental destruction. "Climate-change impacts on food and water systems, declining crop yields and rising food prices driven by drought, wildfire and harvest failures have already become catalysts for social breakdown and conflict across the Middle East, the Maghreb and the Sahel, contributing to the European migration crisis," the report said. The report was written by David Spratt, research director for Breakthrough National Centre for Climate Restoration in Melbourne, and Ian T. Dunlop, formerly an international oil, gas and coal industry executive and chair of the Australian Coal Association. Retired Admiral Chris Barrie, former defense forces chief of Australia, endorsed the report and wrote a forward to it. "After nuclear war, human induced global warming is the greatest threat to human life on the planet," Barrie wrote. Using a worst-case scenario existential risk analysis, Spratt and Dunlop depict **humanity fall[s]**ing **into ruin under an additional 2 degrees Celsius of warming — a threshold scientists say the world is heading towards if** current trends continue. In their scenario, "tipping points" occur when **humanity fails to institute** carbon emission **reforms in the 2020s and 2030s**. This creates a "hothouse" effect on Earth, leading to rapidly rising sea levels set off by melting of the Greenland Ice Sheet and "widespread permafrost loss and large-scale Amazon drought and dieback." In this scenario, the "hothouse Earth" effect causes "35 percent of the global land area, and 55 percent of the global population, (to be) subject to more than 20 days a year of lethal heat conditions, beyond the threshold of human survivability." **Ecosystems collapse**, including coral reef systems, the Amazon rainforest and the Arctic, along with a massive die-off of the insect population. As a result, the authors say, some of the world's most populated cities — Mumbai, Jakarta, Guangzhou, Tianjin, Hong Kong, Ho Chi Minh City, Shanghai, Lagos, Bangkok and Manila — would have to be abandoned due to their location in the tropical zone. The assessment ends with a harrowing conclusion: "More than a billion people may need to be relocated and in high-end scenarios, the scale of destruction is beyond our capacity to model, **with a high likelihood of human civilization coming to an end**." The report also paints a grim picture in terms of national security, with extreme climate conditions and the disruption of huge populations placing "the internal cohesion of nations ... under great stress." "The flooding of coastal communities around the world, especially in the Netherlands, the United States, South Asia, and China, has the potential to challenge regional and even national identities," the report warns. "Armed conflict between nations over resources, such as the Nile and its tributaries, is likely and nuclear war is possible. The social consequences range from increased religious fervor to outright chaos."

#### **Next advantage is inequality.**

#### **Inequality is bad now, but it’s getting better**

Jeanna **Smialek** **and** Jim **Tankersley** April 23 **2021** “One Thing America Might Buy With All the Spending? Less Inequality.” The New York Times,<https://www.nytimes.com/2021/04/23/business/economy/biden-inequality-monetary-policy.html> Jeanna Smialek writes about the Federal Reserve and the economy for The New York Times. Jim Tankersley is a White House correspondent for The New York Times, with a focus on economic policy. Over more than a decade covering politics and economics in Washington, he has written extensively about the stagnation of the American middle class and the decline of economic opportunity in wide swaths of the country.

The coronavirus pandemic has threatened to rapidly expand yawning gaps between the rich and the poor, throwing lower-earning service workers out of jobs, costing them income, and limiting their ability to build wealth. But by betting on big government spending to pull the economy back from the brink, United States policymakers could limit that fallout.

**The** $1.9 trillion **economic aid package** President **Biden signed** into law last month **includes** a wide range of programs with **the potential to help poor and middle-class Americans to supplement lost income and save money.** That includes monthly payments to parents, relief for renters and help with student loans.

Now, the administration is rolling out additional plans that would go even further, including a [$2.3 trillion infrastructure package](https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan/) and about $1.5 trillion in spending and tax credits to [support the labor force by investing in child care](https://www.nytimes.com/2021/04/22/business/biden-taxes.html?action=click&module=Top%20Stories&pgtype=Homepage), paid leave, universal prekindergarten and free community college. The measures are explicitly meant to help left-behind workers and communities of color who have faced systemic racism and entrenched disadvantages — and they would be [funded, in part, by taxes on the rich](https://www.nytimes.com/2021/04/22/business/economy/biden-taxes.html).

Forecasters predict that **the government spending** — even just what has been passed so far — **will** fuel what could be the fastest annual economic growth in a generation this year and next, as the country recovers and the economy reopens from the coronavirus pandemic. By jump-starting the economy from the bottom and middle, the response could **make sure the pandemic rebound is more equitable** than it would be without a proactive government response, analysts said.

#### **Extraction of resources in space increases inequality by exclusively benefiting wealthy American shareholders at an *unprecedented* level**

**Shammas and Holen 19**. Victor L. Shammas (Oslo Metropolitan University, Work Research Institute (AFI), Oslo, Norway) and Tomas B. Holen (Independent scholar, Oslo, Norway). One giant leap for capitalistkind: private enterprise in outer space. *Palgrave Commun* 5, 10 (2019).<https://doi.org/10.1057/s41599-019-0218-9>

But how are we to understand NewSpace? In some ways, NewSpace signals the emergence of capitalism in space. The production of carrier rockets, placement of satellites into orbit around Earth, and the exploration, **exploitation**, or colonization of outer space (including planets, asteroids, and other celestial objects), **will** not **be the work of** humankind as such, a pure species-being (Gattungswesen), but of **particular capitalist entrepreneurs** who stand in for and represent humanity. Crucially, they will do so in ways modulated by the exigencies of capital accumulation. These enterprising capitalists are **forging a new political-economic regime** in space, a post-Fordism in space **aimed at profit maximization and** the apparent **minimization of government interference**. A new breed of charismatic, starry-eyed entrepreneurs, including Musk’s SpaceX, Richard Branson’s Virgin Galactic, and Amazon billionaire Jeff Bezos’s Blue Origin, to name but a selection, aim at becoming ‘capitalists in space' (Parker, [2009](https://www.nature.com/articles/s41599-019-0218-9#ref-CR49)) or space capitalists. Neil Armstrong’s famous statement will have to be reformulated: space will not be the site of ‘one giant leap for mankind', but rather one giant leap for capitalistkind. [Footnote5](https://www.nature.com/articles/s41599-019-0218-9#Fn5) With the ascendancy of NewSpace, **humanity’s future in space will not be ‘ours**', benefiting humanity tout court, but will rather be the result of particular capitalists, or capitalistkind,[Footnote6](https://www.nature.com/articles/s41599-019-0218-9#Fn6) toiling to recuperate space and bring its vast domain into the fold of capital accumulation: NewSpace sees **outer space** as the domain of private enterprise, **set to be**come **the ‘first-trillion dollar industry'**, according to some estimates, **and likely to produce the world’s first trillionaires** (see, e.g., Honan, [2018](https://www.nature.com/articles/s41599-019-0218-9#ref-CR30))—as opposed to Old Space, a derisive moniker coined by enthusiastic proponents of capitalism-in-space, widely seen to have been the sole preserve of the state and a handful of giant aerospace corporations, including Boeing and Lockheed Martin, in Cold War-era Space Age.

Under Donald Trump’s presidency, the adherents of NewSpace have found a ready political partner. The commercialization of outer space was already well under way with Obama’s 2010 National Space Policy, which emphasized ‘promoting and supporting a competitive U. S. commercial space sector', which was ‘considered vital to…continued progress in space' (Tronchetti, [2013](https://www.nature.com/articles/s41599-019-0218-9#ref-CR61), p. 67–68). But the Trump administration has aggressively pursued the deregulation of outer space in the service of profit margins. Wilbur Ross, President Trump’s Secretary of Commerce, has eagerly supported the private space industry by pushing the dismantling of regulatory frameworks. As Ross emphatically stated, ‘The rate of regulatory change must accelerate until it can match the rate of technological change!' (Foust, [2018a](https://www.nature.com/articles/s41599-019-0218-9#ref-CR17)). Trump has proposed privatizing the provision of supplies to the International Space Station (ISS) while re-establishing the Cold War-era National Space Council, which includes members from Lockheed Martin, Boeing, ULA, and a series of NewSpace actors, such as SpaceX and Blue Origin. Ross was visibly enthusiastic about SpaceX’s Falcon Heavy launch in February 2018 and seemed to embrace Musk’s marketing ploy. ‘It was really quite an amazing thing', Ross said. ‘At the end of it, you have that little red Tesla hurdling [sic] off to an orbit around the sun and the moon' (Bryan, [2018](https://www.nature.com/articles/s41599-019-0218-9#ref-CR6)). That same month, Ross spoke before the National Space Council, commenting appreciatively that ‘space is already a $330 billion industry' that was set to become a ‘multitrillion-dollar one in coming decades'. He noted that private corporations needed ‘all the help we can give them' and said it was ‘time to unshackle business activity in space' (Department of Commerce, [2018](https://www.nature.com/articles/s41599-019-0218-9#ref-CR11)).

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#### **Inequality decreases investment in the economy and slows growth**

**Baker and Salop 15.** Jonathan B. Baker and Steven C. Salop. “Antitrust, Competition Policy, and Inequality.” The Georgetown Law Journal Online, Vol. 104:1. Georgetown University Law Center. (Jonathan B. Baker, a former Director of the Bureau of Economics at the Federal Trade Commission, is a Research Professor of Law at American University. Steven C. Salop is an American economist and academic who is a Professor of Economics and Law at the Georgetown University Law Center.)

Some inequality is a natural byproduct of a market economy: the market generates winners and losers, and the prospect of economic success helps foster effort,

investment, and innovation. But these positive effects on innovation and entrepreneurship do not automatically benefit everyone, as demonstrated by the fact that over the past quarter century labor productivity has increased steadily while hourly worker compensation has stagnated.23 More importantly, this observation does not automatically justify whatever inequality the market happens to produce. Inequality also involves social costs. Interpersonal utility comparisons are beyond the scope of standard economic models. However, individuals generally and policy makers in particular do make such comparisons. We suspect that many people consider a wide economic gap between rich and poor to be objectionable.24 Using the language of economics, in terms of purchasing goods and services, one would say that a dollar of marginal income spent by a less wealthy person is generally more valuable socially than that marginal dollar of income spent by a very wealthy person.25 In populist lay terms, we expect most people would agree that it is more valuable to give an extra thousand dollars to a poor mother to spend on dental care and food for her children than to give it to an investment banker and his partners to spend on a fine dinner and wine. In addition, **inequality** may **undermine the legitimacy of our social order**.26 The trend toward greater economic success at the very top while most households lose ground threatens to undermine the American Dream and erode the sense that our society gives everyone a fair opportunity to succeed and an equal voice in the nation’s future.27 By undermining that sense, inequality may harm the morale and work effort of those left behind.28 Another problem is political. The wealthiest have a disproportionate influence on public policy. 29 This gives them an ability and incentive to skew

public investments and government policies to favor themselves.30 These policies also may harm others.31 For example, the fundamental short-run policy tradeoff faced by the Federal Reserve is balancing the harms from unemployment against the risks of inflation. The rich have less incentive to favor policies that tilt towards reductions in unemployment relative to prevention of inflation. They are unlikely to become unemployed. And as creditors with some assets denominated in nominal terms, their real wealth is reduced by inflation.32 While unemployment reduces demand for the products sold by the firms they own, that harm to the firms is mitigated somewhat by the fact that high unemployment reduces the wage demands of workers.33 The middle class and poor, by contrast, are far more likely to experience unemployment or lower wages as the result of a higher unemployment rate. They also are more likely debtors that benefit from inflation. This political effect can make inequality self-reinforcing: the economic power of those at the top gives the wealthy political power, which can be used to entrench and enhance their economic power, further increase their political power, and so on. This vicious cycle creates the possibility that inequality could threaten our democracy.34 This concern is exacerbated by the growing trend to greater social separation by the top earners, through gated communities, private schools, and other privileges. For example, it has long been suggested that private schools reduce political support for larger public school budgets. The same point might be made with respect to public health care and transportation when concierge doctors and express lanes cater to the rich. Inequality also can reduce economic growth. The **economic literature has reached a** “tentative **consensus” that inequality** “tends to **reduce** the pace and durability of **growth**.”35 Even a small reduction in the long-term rate of growth makes a substantial difference to economic well-being from one generation to the next. 36 Inequality can slow economic growth for several reasons. Workers in families experiencing financial hardship may find it difficult to invest in education and training because they lack the necessary savings and because financial market imperfections limit their ability to borrow against their future prospects.37 Their incentives to change jobs, learn new skills, or start new businesses also can be reduced. Poverty makes it harder for students to learn, and a majority of the students in public schools today are from low-income families. 38 Moreover, the disproportionate influence on public policy by those at the very top can lead to insufficient provision of public goods that would disproportionately benefit others, even when those programs foster overall economic growth. These same factors also can contribute to creating a vicious cycle of widening inequality. We are not claiming that concerns about inequality are ignored in our society. Social insurance programs provide benefits to people who are unemployed, poor, retired and disabled. Government programs support public goods such as health care, education, job training, and housing. While certain redistributive policies may impede growth,39 redistribution has generally not done so in practice. 40 Instead, these programs have been found to encourage economic growth, even when they are funded in ways that redistribute resources away from those at the top.41 Despite these benefits from redistribution, existing programs do not appear to have offset the growing inequality in our economy.

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#### **Inequality causes extinction.**

**Liu 18 –** Qian Liu, Managing Director, Greater China, The Economist Group – (Qian Liu, November 13th, 2018) – “The next economic crisis could cause a global conflict. Here's why” – <https://www.weforum.org/agenda/2018/11/the-next-economic-crisis-could-cause-a-global-conflict-heres-why>

The next economic crisis is closer than you think. But what you should really worry about is what comes after: in the current social, political, and technological landscape, **a prolonged economic crisis, combined with rising income inequality, could well escalate into a major global military conflict.** The 2008-09 global financial crisis almost bankrupted governments and caused systemic collapse. Policymakers managed to pull the global economy back from the brink, using massive monetary stimulus, including quantitative easing and near-zero (or even negative) interest rates. But monetary stimulus is like an adrenaline shot to jump-start an arrested heart; it can revive the patient, but it does nothing to cure the disease. Treating a sick economy requires structural reforms, which can cover everything from financial and labor markets to tax systems, fertility patterns, and education policies. Policymakers have utterly failed to pursue such reforms, despite promising to do so. Instead, they have remained preoccupied with politics. From Italy to Germany, forming and sustaining governments now seems to take more time than actual governing. And Greece, for example, has relied on money from international creditors to keep its head (barely) above water, rather than genuinely reforming its pension system or improving its business environment. The lack of structural reform has meant that the unprecedented excess liquidity that central banks injected into their economies was not allocated to its most efficient uses. Instead, it raised global asset prices to levels even higher than those prevailing before 2008. In the United States, housing prices are now 8% [higher](https://www.zillow.com/home-values/) than they were at the peak of the property bubble in 2006, according to the property website Zillow. The price-to-earnings (CAPE) ratio, which measures whether stock-market prices are within a reasonable range, is now [higher](http://www.multpl.com/shiller-pe/) than it was both in 2008 and at the start of the Great Depression in 1929. As monetary tightening reveals the vulnerabilities in the real economy, the collapse of asset-price bubbles will trigger another economic crisis – one that could be even more severe than the last, because we have built up a tolerance to our strongest macroeconomic medications. A decade of regular adrenaline shots, in the form of ultra-low interest rates and unconventional monetary policies, has severely depleted their power to stabilize and stimulate the economy. If history is any guide, the consequences of this mistake could extend far beyond the economy. According to Harvard’s Benjamin Friedman, [prolonged periods](https://scholar.harvard.edu/files/bfriedman/files/the_moral_consequences_of_economic_growth_0.pdf) of economic distress have been characterized also by public antipathy toward minority groups or foreign countries – attitudes that can help to fuel unrest, terrorism, or even war. For example, **during the Great Depression**,, US President Herbert Hoover signed the 1930 Smoot-Hawley Tariff Act, intended to protect American workers and farmers from foreign competition. In the subsequent five years, global **trade shrank by two-thirds. Within a decade, World War II had begun.** To be sure, WWII, like World War I, was caused by a multitude of factors; there is no standard path to war. But there is reason to believe that high levels of inequality can play a significant role in stoking conflict. According to [research](http://www.hup.harvard.edu/catalog.php?isbn=9780674430006) by the economist Thomas Piketty**, a spike in income inequality is often followed by a great crisis**. Income inequality then declines for a while, before rising again, until a new peak – and a new disaster. Though causality has yet to be proven, given the limited number of data points, this correlation should not be taken lightly, especially with wealth and income inequality at historically high levels. **This is** all the **more worrying in view of** the numerous other factors stoking **social unrest and diplomatic tension,** including **technological disruption**, a record-breaking migration crisis, anxiety over **globalization, political polarization, and rising nationalism.** All are symptoms of failed policies that could turn out to be trigger points for a future crisis. Voters have good reason to be frustrated, but the emotionally appealing populists to whom they are increasingly giving their support are offering ill-advised solutions that will only make matters worse. For example, despite the world’s unprecedented interconnectedness, multilateralism is increasingly being eschewed, as countries – most notably, Donald Trump’s US – pursue unilateral, isolationist policies. Meanwhile, proxy wars are raging in Syria and Yemen. Against this background, we must take seriously the possibility that the next economic crisis could lead to a large-scale military confrontation. By the [logic](http://www.simonandschuster.com/books/The-Clash-of-Civilizations-and-the-Remaking-of-World-Order/Samuel-P-Huntington/9781451628975) of the political scientist Samuel Huntington , considering such a scenario could help us avoid it, because it would force us to take action. In this case, the key will be for policymakers to pursue the structural reforms that they have long promised, while replacing finger-pointing and antagonism with a sensible and respectful global dialogue. The alternative may well be global conflagration.

# **Advocacy**

**Resolved: The appropriation of outer space by private entities is unjust.**

# **framing**

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**The standard is maximizing well-being**

**Util is intrinsic, so we can’t avoid it**

**Nagel 86:** Thomas Nagel, The View From Nowhere, HUP, 1986: 156-168.

I shall defend the unsurprising claim that sensory **pleasure is good and pain bad**, no matter whose they are. The point of the exercise is to see how the pressures of objectification operate in a simple case. Physical pleasure and pain do not usually depend on activities or desires which themselves raise questions of justification and value. **They are** just **sensory experiences** in relation to which we are fairly passive, but **toward which we feel involuntary desire or aversion**. Almost **[E]veryone takes the avoidance of** his **{their} own pain and** the **promotion of** his own **pleasure as** subjective **reasons for action in a fairly simple way**; they are not back[ed] up by any further reasons.

**Prefer for three reasons:**

1. **Utilitarianism avoids fixation on one value, which leads to a more holistic analysis of impacts since it allows us to take many factors into consideration when making decisions.**
2. **It acknowledges the intrinsic value of humans the best—respecting persons’ equal worth requires that we quantify consequences so that we can promote the lives and liberties of the greatest number of individuals possible.**

**3) Weighing ground: consequences lets us weigh the probability of a scenario, its risk, scope, severity, etc. and we can even weigh between these standards. Resolvability because if we can’t weigh, then we don’t know what offense matters. The judge needs to know how to make a decision.**

#### **Extinction comes first under any framework**

**Pummer 15** [Theron, Junior Research Fellow in Philosophy at St. Anne's College, University of Oxford. “Moral Agreement on Saving the World” Practical Ethics, University of Oxford. May 18, 2015] AT

There appears to be lot of disagreement in moral philosophy. Whether these many apparent disagreements are deep and irresolvable, I believe there is at least one thing it is reasonable to agree on right now, whatever general moral view we adopt: that it is very important to reduce the risk that all intelligent beings on this planet are eliminated by an enormous catastrophe, such as a nuclear war. How we might in fact try to reduce such existential risks is discussed elsewhere. My claim here is only that we – whether we’re consequentialists, deontologists, or virtue ethicists – should all agree that we should try to save the world. According to consequentialism, we should maximize the good, where this is taken to be the goodness, from an impartial perspective, of outcomes. Clearly one thing that makes an outcome good is that the people in it are doing well. There is little disagreement here. If the happiness or well-being of possible future people is just as important as that of people who already exist, and if they would have good lives, it is not hard to see how **reducing existential risk is** easily **the most important thing in the whole world.** This is for the familiar reason that there are **so many people** who **could exist in the future** – there aretrillions upon trillions… upon trillions. There are so many possible future people that reducing existential risk is arguably the most important thing in the world, **even if the well-being of these possible peopl`e were given only 0.001% as much weight** as that of existing people. Even on a wholly person-affecting view – according to which there’s nothing (apart from effects on existing people) to be said in favor of creating happy people – the case for reducing existential risk is very strong. As noted in this seminal paper, this case is strengthened by the fact that there’s a good chance that many existing people will, with the aid of life-extension technology, live very long and very high quality lives. You might think what I have just argued applies to consequentialists only. There is a tendency to assume that, if an argument appeals to consequentialist considerations (the goodness of outcomes), it is irrelevant to non-consequentialists. But that is a huge mistake. Non-consequentialism is the view that there’s more that determines rightness than the goodness of consequences or outcomes; **it is not the view that the latter don’t matter**. Even John Rawls wrote, “All ethical doctrines worth our attention take consequences into account in judging rightness. One which did not would simply be irrational, crazy.” **Minimally plausible versions of deontology and virtue ethics must be concerned in part with promoting the good**, from an impartial point of view. They’d thus imply very strong reasons to reduce existential risk, at least when this doesn’t significantly involve doing harm to others or damaging one’s character. What’s even more surprising, perhaps, is that even if our own good (or that of those near and dear to us) has much greater weight than goodness from the impartial “point of view of the universe,” indeed even if the latter is entirely morally irrelevant, we may nonetheless have very strong reasons to reduce existential risk. Even egoism, the view that each agent should maximize her own good, might imply strong reasons to reduce existential risk. It will depend, among other things, on what one’s own good consists in. If well-being consisted in pleasure only, it is somewhat harder to argue that egoism would imply strong reasons to reduce existential risk – perhaps we could argue that one would maximize her expected hedonic well-being by funding life extension technology or by having herself cryogenically frozen at the time of her bodily death as well as giving money to reduce existential risk (so that there is a world for her to live in!). I am not sure, however, how strong the reasons to do this would be. But views which imply that, if I don’t care about other people, I have no or very little reason to help them are not even minimally plausible views (in addition to hedonistic egoism, I here have in mind views that imply that one has no reason to perform an act unless one actually desires to do that act). To be minimally plausible, egoism will need to be paired with a more sophisticated account of well-being. To see this, it is enough to consider, as Plato did, the possibility of a ring of invisibility – suppose that, while wearing it, Ayn could derive some pleasure by helping the poor, but instead could derive just a bit more by severely harming them. Hedonistic egoism would absurdly imply she should do the latter. To avoid this implication, egoists would need to build something like the meaningfulness of a life into well-being, in some robust way, where this would to a significant extent be a function of other-regarding concerns (see chapter 12 of this classic intro to ethics). But once these elements are included, we can (roughly, as above) argue that this sort of egoism will imply strong reasons to reduce existential risk. Add to all of this Samuel Scheffler’s recent intriguing arguments (quick podcast version available here) that most of what makes our lives go well would be ndermined if there were no future generations of intelligent persons. On his view, my life would contain vastly less well-being if (say) a year after my death the world came to an end. So obviously if Scheffler were right I’d have very strong reason to reduce existential risk. We should also take into account moral uncertainty. What is it reasonable for one to do, when one is uncertain not (only) about the empirical facts, but also about the moral facts? I’ve just argued that there’s agreement among minimally plausible ethical views that we have strong reason to reduce existential risk – not only consequentialists, but also deontologists, virtue ethicists, and sophisticated egoists should agree. But even those (hedonistic egoists) who disagree should have a significant level of confidence that they are mistaken, and that one of the above views is correct. Even if they were 90% sure that their view is the correct one (and 10% sure that one of these other ones is correct), they would have pretty strong reason, from the standpoint of moral uncertainty, to reduce existential risk. Perhaps most disturbingly still, **even if we are only 1% sure that** the **well-being** of possible future people **matters**, it is at least arguable that, from the standpoint of moral uncertainty, reducing existential risk is the most important thing in the world. Again, this is largely for the reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. (For more on this and other related issues, see this excellent dissertation). Of course, it is uncertain whether these untold trillions would, in general, have good lives. It’s possible they’ll be miserable. It is enough for my claim that there is moral agreement in the relevant sense if, at least given certain empirical claims about what future lives would most likely be like, **all** minimally plausible **moral views would converge on the conclusion that we should try to save the world.** While there are some non-crazy views that place significantly greater moral weight on avoiding suffering than on promoting happiness, for reasons others have offered (and for independent reasons I won’t get into here unless requested to), they nonetheless seem to be fairly implausible views. And even if things did not go well for our ancestors, I am optimistic that they will overall go fantastically well for our descendants, if we allow them to. I suspect that most of us alive today – at least those of us not suffering from extreme illness or poverty – have lives that are well worth living, and that things will continue to improve. Derek Parfit, whose work has emphasized future generations as well as agreement in ethics, described our situation clearly and accurately: “We live during the hinge of history. Given the scientific and technological discoveries of the last two centuries, the world has never changed as fast. We shall soon have even greater powers to transform, not only our surroundings, but ourselves and our successors. If we act wisely in the next few centuries, humanity will survive its most dangerous and decisive period. Our descendants could, if necessary, go elsewhere, spreading through this galaxy…. Our descendants might, I believe, make the further future very good. But that good future may also depend in part on us. If our selfish recklessness ends human history, we would be acting very wrongly.” (From chapter 36 of On What Matters)