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# **Resolution**

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

# **1NC - CP**

#### **CP: The appropriation of outer space by private companies is unjust with the exception of LEOs which should be encouraged**

#### 

#### **That competes –**

#### **The resolution/plan is entirely of appropriation, but the CP is mutually exclusive with the aff’s plan because they get rid of ALL private space appropriation, but our counterplan does LESS than the affirmative.**

#### **We solve for the entirety of the affirmative’s case.**

#### **CASE 1: Space Based Solar Power is necessary to reduce emissions and solve climate change**

**Shtivelman 12** - J.D., Boston University School of Law [Aleksey, 2012, *B. U. J. SCI. & TECH. L. Vol. 18:435*, “SOLAR POWER SATELLITES: THE RIGHT TO A SPOT IN THE WORLD'S HIGHEST PARKING LOT”, Hein Online]

\*\*\*edited for gendered language

Rather than spending millions on land-based solar power projects, it would be much more profitable if these nations invested in SBSP satellites for two reasons. First, although SBSP satellites are much more expensive at the outset, the cost of initial investment is returned in a period of time comparable to what it would take to recoup the investment cost of a land-based solar farm. 113 Second, SBSP satellites generate about **eight to ten times** as much power as land-based **solar farms**."l 4 This means that after one and a half years, SBSP satellites would generate **eight to ten times the revenue** of a land-based solar farm. As a result, countries that currently rely on coal, nuclear or other types of non-clean, non-renewable energy **may look to SBSP** for their energy needs, and consequently generate a **significant spike in demand** for orbital locations on the GSO. This increased demand will raise two issues: (1) whether a GSO orbital **slot can be owned**, and, (2) if not, whether there is a way to allocate the right to access GSO orbital slots for a period of time. A viable legal framework could address both of these issues in a clear and precise manner. The ITU currently allocates slots for telecommunications satellites, but the increased demand for slots in GSO for SBSP satellites may force countries to reevaluate ITU's authority to regulate SBSP satellites.

1. An unsuccessful attempt to appropriate GSO slots

The ITU allocation is one way to solve the problem, but given the physical limitations of the GSO, there is an underlying conflict between the goals of fair and equitable access on one side and the GSO's efficient use on the other.' 5 The conflict arises when developed countries receive priority to access the GSO because they have the demand, infrastructure, and funding to put satellites into orbit, while developing countries without viable satellites also want access the GSO. 116 This a posteriori approach to GSO property rights favors those who are first to apply for frequency and orbital slots and protects those applicants from interference by later users."17 At the same time, developing countries do not favor such a "free-market-approach" to GSO access; on the contrary, they **would like a multilateral approach** that distributes access to the GSO equitably among all nations. 118 "As feared by the developing States, this a posteriori system [has] provided a few industrialized and rich States with the opportunity of temporarily unlimited use of registered frequencies and orbit positions."' "19 Developing countries feel that they should have equal access to these frequencies and orbital slots. 120

These countries have tried to gain leverage over the GSO resource by advocating for the creation of an administrative agency that would allocate a part of the GSO to each country. In 1976, eight developing countries above the equator claimed sovereign right over the parts of the GSO lying over their territories and called for the administration of the rest of the GSO. 12 ' The Declaration of the First Meeting of Equatorial Countries (**the "Bogota Declaration**") asserted that these countries had the right to parts of the GSO because the orbit should be considered part of the earth and not outer space. 22 These countries argued that the gravitational force that produces the GSO was defived from their land.' 23 Both developed **and developing** countries rejected the Bogota Declaration's arguments because its claims were weak: the gravity that produces the orbit (1) is **produced by the entire earth**, not just these eight nations, and (2) produces all orbits, not just the GSO.124

Another of the arguments in the Bogota Declaration was that there is no legally defined boundary as to **where an atmosphere ends and space begins**. 125 Furthermore, the Bogota Declaration declared that even the Outer Space Treaty, which provides the basic outline for the peaceful exploration and use of outer space, does not address the issue. 126 While there is no definition that all countries in the world accept regarding the boundary of space, the International Aeronautic Federation recognizes the Karman Line as the edge of the atmosphere and the beginning of space.' 27 The International Aeronautic Federation is a non-governmental organization founded in 1905, for the purpose of encouraging aeronautical and astronautical activities worldwide. 28 It has 100 member countries, including the United States, United Kingdom, Spain, Sweden, South Africa, Mongolia, Korea, Israel, Iran, as well as many others.1 29 For the preceding reasons, the International Aeronautic Federation portrays a widely held view concerning the definition of space. The Karman line is one hundred kilometers above sea level, and that is where the atmosphere becomes so thin that an airplane cannot fly and a spaceship is needed for flight.' 30 The GSO lies more than 35,000 kilometers above sea level, which is approximately 34,900 kilometers higher than the Karman line. Therefore, GSO is well above the demarcation of space that is internationally recognized. For this reason and others, most countries did not accept the Bogota Declaration. Accordingly, the Bogota Declaration was an unsuccessful attempt to appropriate GSO slots.

1. Space law must allow appropriation of space for the good of everyone

The Bogota Declaration was ultimately a failure because it **violated** internationally accepted principles. According to the Outer Space Treaty of 1967, GSO orbital positions and frequencies cannot be appropriated because no country can appropriate or own space. 31 **Ninety-one states have signed this treaty, including the United States, the United Kingdom, Ukraine, Japan, Greece, Denmark, Spain, Uganda, Afghanistan, Iraq and many others**. 32 The treaty specifies that outer space is the "province of mankind" and that all activity should be done for the benefit of all of humanity. 133 It would then seem that no country could have exclusive ownership over an orbital position in the GSO or any orbit. 134

Even if the Outer Space Treaty of 1967 prohibits countries from **owning orbital slots** in the GSO, the slots should still be allocated to countries that will use them, on a first-come, first-served basis. SBSP has so much potential to benefit all of [hu]mankind that if even a single country uses a GSO slot to gather power, the advantage of developing the technology of SBSP **may outweigh** the argument that all nations should have equal access to space.'3 5 Countries like Tonga that have no capability of sending satellites into orbit should not be able to claim GSO slots because this would prohibit developed countries from **placing satellites into orbit that can benefit the whole world.**136

The Outer Space Treaty of 1967 likely permits the allocation of GSO slots to individual countries **on the condition** that the slots are used for SBSP satellites that **benefit all mankind**.

Countries with orbiting SBSP satellites could meet such conditional requirements in three ways. First, they **could be required to provide power** to less developed countries. Second, launching countries can help decrease global warming because SBSP satellites provide clean energy. Third, launching countries can lower the cost of solar power systems as they become **cheaper and more affordable** with time so that many less developed countries around the world will be able to access solar power from space. By satisfying any of these conditions, deployment of SBSP satellites would qualify under the treaty as "use of outer space ... carried out for the benefit and in the interests of all countries."'137 The universal benefits provided by SBSP satellites would therefore **be consistent** with the treaty's requirement that the use of outer space "shall be the province of all mankind." 138 Thus, while the **Outer Space Treaty** of 1967 may prohibit ownership of GSO slots, the temporary allocation of GSO slots for the use of SBSP satellites would be compatible with the goals of the treaty. ."

As a result of the need to allow SBSP to have access to the GSO, there will need to be some sort of regulatory structure to GSO slot allocation. If a regulatory organization, such as the ITU, allows licensees to use a particular GSO position and microwave frequency, for a limited period of time, this would appear to satisfy the current international regime under the Outer Space Treaty of 1967. In order to comply with the treaty, countries would not have to surrender their slot or frequency, as they could simply allow other countries to lease the power satellites from them for a period of time. SBSP satellites in GSO would fall within the "province of mankind" requirement of the Outer Space Treaty of 1967 because SBSP can **decrease global warming** and help less developed countries by **providing them with electricity in areas lacking infrastructure**. Furthermore, SBSP satellites in GSO would satisfy the "peaceful purposes" requirement of the Outer Space Treaty of 1967 because the satellites are used for commercial power production and **cannot be converted into weapons**. 139

## CASE 2: Wifi LEOs

#### **Low Earth Orbit Satellite constellations.**

#### **Solves broadband internet access which is key for Native communities.**

**Venkatesan et al 20** (Aparna Venkatesan is a Professor in the Department of Physics and Astronomy at the University of San Francisco. James Lowenthal is a professor of Astronomy at Smith College. Parvathy Prem is a Planetary Scientist specializing in Planetary research at Johns Hopkins University Applied Physics Laboratory. Monica Vidaurri works as a research scientist at NASA Goddard Space Flight Center, specializing in astrobiology, policy, and ethics. “The impact of satellite constellations on space as an ancestral global commons”. November 06, 2020.)

**Satellite constellations could greatly improve** communications and ongoing **monitoring of** Earth **phenomena ranging from** weather and **climate to disaster management. Such large constellations also** have the potential to **offer global connectivity through** low-cost high-speed **broadband** internet. In principle, **this could be the critical leap needed to bridge the very real digital divide**2, **especially for** the world’s most minoritized populations, including **Indigenous communities.** This divide has been exposed as a chasm during this pandemic year, affecting many millions of students and low-income workers. **Broadband internet has become essential for daily life**, especially **during a pandemic** year when remote forms of learning, teaching, work and even health (for example, telemedicine) have become the norm. In 2019, the FCC offered US$20 billion in subsidies over ten years to address the digital divide in rural communities in the United States, which was quickly followed by a number of filings for LEOsats. **LEOsat broadband may benefit rural communities** more than urban areas—these ‘last mile’ connections are still challenging to complete relative to concentrated (urban) populations where ground-based cable/fibre internet infrastructure is cheaper. **Large satellite constellations thus have the potential to bridge the digital chasm**, but time will tell whether the promise of low-cost high-speed internet worldwide is achieved, **and** what the financial costs to customers are. **This potential democratization of space is worth noting, even if it may not lead to fair participation in space.**

### **Case 3: O’Neill Cylinders**

#### **O’Neill Cylinders are on the way, but funding and companies like SpaceX and Blue Origin are key because governments are insufficient.**

**Kanchwalla 21**

Hussain Kanchwalla (scholar at the indian institute of technology), 11-13-2021, "What is an O’Neill Cylinder?," Science ABC, https://www.scienceabc.com/nature/universe/what-is-oneill-cylinder.html, // HW AW

Many people believe that the Earth will soon be in danger and the sprawling nature of humanity is the undeniable cause. With the rapid [technological progress](https://www.scienceabc.com/nature/universe/what-is-kardashev-scale.html) and advancement of the past few centuries, we’re quickly exhausting the resources from planet Earth in order to power our industrial needs and global commerce. Many futurists feel that we will be left with no option but to explore and colonize space if we intend to survive into a future when resources on Earth can no longer meet our requirements. [Overpopulation is an imminent challenge](https://www.scienceabc.com/humans/malthusian-catastrophe-shortage-of-food-sources-population-explosion.html) that makes the need for interstellar travel and colonization even more urgent. That being said, [**building a space habitat**](https://www.scienceabc.com/nature/universe/can-we-build-a-habitable-planet-from-scratch.html) **is no easy pursuit and is loaded with daunting challenges, such as the need for construction facilities in space, the recreation of livable communities in space, the recycling and processing of waste, the simulation of artificial gravity, and most importantly—convincing governments and global organizations that this venture is worth pursuing.** The prospect of space colonization paves the way for devising methods to extract energy from resources on other planets. On Earth, harnessing energy from the Sun using [solar panels](https://www.scienceabc.com/innovation/why-is-there-a-limit-to-the-efficiency-of-solar-panels.html) isn’t particularly efficient, and faces inevitable barriers caused by the atmosphere and the daily occurrence of darkness (e.g., nighttime). However, in space, solar constructs can perpetually harness energy from the Sun without interruption. Utilizing this copious amount of energy would permit us to travel throughout our solar system without worrying about energy expenditure. Moreover, chemical resources would be in great supply in our solar system. To begin with, NASA has recently embarked on a project to generate fuel, water, and oxygen from resources present on the Moon. Given these foundations for why organizations should foray into developing a space habitat, allow me to introduce the **O’Neill cylinder—a space settlement design consisting of two counter-rotating cylinders** proposed by renowned physicist Gerard O’Neill a few decades ago. Aside from being a physicist, O’Neill was also a professor at Princeton University and a space enthusiast. Although he is most widely acclaimed for his work in physics, where he developed new concepts to explore particle physics at higher energies, his work on space colonization turned out to be his truly long-lasting legacy. Origin of the Idea for the O’Neill Cylinder While teaching physics to his students at Princeton University, O’Neill assigned them the task of designing a megastructure in space in order to demonstrate that living and surviving in space is actually a possibility. His students came up with numerous designs to accommodate human habitation in space. After a long session of brainstorming, O’Neill boiled their theories down to the idea of a cylinder-like space settlement design. Later, additional details and the functioning of this design were published in Physics Today in 1974; the cylinder was aptly called the O’Neill cylinder. Design of the O’Neill Cylinder The O’Neill cylinder design consists of two cylinders rotating in opposite directions on a [bearing](https://www.scienceabc.com/eyeopeners/what-is-a-bearing.html) to mitigate the gyroscopic effect. Each cylinder was proposed to be 20 miles long and 5 miles in diameter, with 6 broad stripes along its length (3 habitable spaces and 3 windows). O’Neill envisioned industrial processes and recreational facilities to be located on the central axis in a virtually zero-gravity environment. Gravity Simulation One key difference between living on Earth and living in space (or on any other astronomical body) is the difference in gravity. [Artificial gravity](https://www.scienceabc.com/innovation/can-create-artificial-gravity.html) is needed for stability, and the O’Neill cylinder has a provision to achieve exactly that. As the two giant cylinders rotate on their axis, they would leverage the centripetal force of any object in the inner surface to create artificial gravity. Considering the cylinder’s dimensions, the acceleration equation: a=v²/r, and substituting the acceleration value of Earth (i.e., 9.81), we can deduce that the cylinder would need to rotate roughly 28 times per hour to simulate an appropriate gravitational force. Earthly Environment Simulation Maintaining an atmosphere with a constitution similar to that of Earth is the next challenge when building a space habitation. The O’Neill cylinder is prudently designed with a ratio of gases similar to what is found on Earth. However, there is a caveat; the pressure is half of that at sea level. This would not impact our breathing substantially, but this minor trade-off would translate into a handful of benefits, such as bringing down the need for gas and the construction of thick walls. The proposed O’Neill cylinder also has provisions wherein the habitat would be able to control its own micro-climate using an arrangement of mirrors and by altering the ratio of gases in the cylinder. Day and Night Simulation With the human habitat situated in a vacuum (space), the cylinder essentially turns into a huge thermos! The theoretical O’Neill cylinder tried to overcome this issue by using a series of mirrors hinged on each of the three windows. This way, direct sunlight could be directed into the cylinder to simulate day time. Similarly, by turning the mirror away, a night-like ambience could be created. This simulated ‘night’ would also permit the heat produced biologically to radiate out of the cylinder. **Despite the design of the O’Neill cylinder being technically sound, the idea is too sophisticated to be implemented with our present technology**. Thus far, its implementation has been confined to the realm of science fiction. However, **given the efforts of organizations like SpaceX and Mars One, perhaps some day O’Neill cylinders will actually help humanity settle in the great vastness of space!**

#### **This permanently solves extinction, which outweighs the affirmative.**

**Haynes 19**, 5/17, Korey "O’Neill colonies: A decades-long dream for settling space," Astronomy, https://astronomy.com/news/2019/05/oneill-colonies-a-decades-long-dream-for-settling-space

Last week, Amazon founder Jeff Bezos revealed his spaceship company’s new lunar lander, dubbed Blue Moon, and he spelled out a bold and broad vision for humanity’s future in space. Faced with the limits of resources here on Earth, most fundamentally energy, he pointed to life in space as a solution. “If we move out into the solar system, for all practical purposes, we have unlimited resources,” Bezos said. “We could have a trillion people out in the solar system.” And while colonies on other planets would be plagued by low gravity, long distances to Earth (leading to communication delays), and further limits down the road, those weaknesses are avoided if the colonies remain truly in space. To that end, Bezos instead suggested people consider taking up residence in O’Neill colonies, a futuristic concept for space settlements first dreamed up decades ago. “These are very large structures, miles on end, and they hold a million people or more each.” Gerard O’Neill was a physicist from Princeton University who teamed up with NASA in the 1970s on a series of workshops that explored efficient ways for humans to live off-world. Beyond influencing Bezos, his ideas have also deeply affected how many space experts and enthusiasts think about realistic ways of living in space. “What will space colonies be like?” O’Neill once asked the Space Science Institute he founded. “First of all, there’s no point in going out into space if the future that we see there is a sterile future of living in tin cans. We have to be able to recreate, in space, habitats which are as beautiful, as Earth-like, as the loveliest parts of planet Earth — and we can do that.” Of course, neither O’Neill nor anyone since has actually made such a habitat, but in many ways, the concepts he helped developed half a century ago remain some of the most practical options for large-scale and long-term space habitation. While NASA has mostly focused on exploring the moon and Mars in recent years, O’Neill colonies offer an option untethered to any planetary body. Instead, **people would live in enormous circular structures in space that would be capable of hosting many thousands of people — or even millions** according to Bezos — on a permanent basis. You may have seen these kinds of colonies in science fiction, from Star Trek, to the movie Interstellar. But in real life, researchers have thought up a a few variations: either a sphere, a cylinder, or a ring-shaped torus. All of these are designed to rotate and create a centrifugal force that mimics gravity for the inhabitants. While the sizes and specifications of the colonies vary, there are a few staples. In general, O’Neill colonies were designed to be **permanent, self-sustaining structures. That means they would use solar power for electrical energy and for growing crops**. The outer walls of an O’Neill colony are generally pictured as a transparent material, so that mirrors can aim sunlight through its walls as needed to provide light and energy – or to allow darkness, a feature humans also need, especially while we sleep. But building these colonies is a challenge beyond any humans have accomplished so far in space, and Bezos acknowledged that. He referred to two “gates” in his announcement, which he clarified as challenges that humans need to overcome. The first, which his company Blue Origin and other space entrepreneurs have been tackling, is to reduce the cost and difficulty of getting to space at all. But the second involves using resources from space, rather than hauling them from Earth. Bezos isn’t alone in such thinking. Most of NASA’s long-term plans for the Moon and Mars involve rely on harvesting materials and manufacturing products locally, using lunar and martian regolith to build and repair structures. And in the shorter term, three of the dozen experiments NASA selected as the first to fly as part of the new lunar program — possibly even by the end of the year — are what NASA terms “resource prospecting instruments.” That pairs well with O’Neill’s vision. These **colonies are meant to use resources gathered from space, whether asteroids, the Moon, or even Mars**. Doing so avoids the costly effort of heaving materials and goods out of Earth’s deep gravity well. That means they would be built using materials available cheaply in space. The humans and their attendant plants and animals would need to be carried from Earth. But raw materials like oxygen, nitrogen and aluminum are plentiful in the solar system, and mining for resources in space is a common theme across space settlement discussions. Because of their size, the colonies should be able to act as fully independent ecosystems, with plants to cycle air and water and resource cycles not so dissimilar from Earth. Humans are a long way from being able to launch anything like an O’Neill colony in the near future. But it’s somewhat telling that, after 50 years

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### **Solvency**

#### **The status quo already prevents the worst-case scenario for private companies in space. Even though the Outer Space Treaty doesn’t bind private entities, governments still restrict and regulate them to ensure just compliance.**

**Eijk 20** [Cristian van Eijk is finishing an accelerated BA in Law at the University of Cambridge. He holds a BA cum laude in International Justice and an LLM in Public International Law from Leiden University, and has previously worked at the T.M.C. Asser Institute and the International Commission on Missing Persons. “Sorry, Elon: Mars is not a legal vacuum – and it’s not yours, either.” Voelkerrechtsblog. May 11, 2020. <https://voelkerrechtsblog.org/sorry-elon-mars-is-not-a-legal-vacuum-and-its-not-yours-either/>] HW AL

Two provisions of the Outer Space Treaty (OST), both also customary, are particularly relevant here. OST article II: “Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.” OST article III: “States… shall carry on activities in the exploration and use of outer space, including (…) celestial bodies, in accordance with international law”. SpaceX is a private entity, and is not bound by the Outer Space Treaty – but that does not mean it can opt out. Its actions in space could have consequences for the United States in three ways. First, the US, as SpaceX’s launch state, bears fault-based liability for injury or damage SpaceX’s space objects cause to other states’ persons or property (OST article VII, Liability Convention articles I, III). Second, the US, as SpaceX’s state of registry, is the sole state that retains jurisdiction and control over SpaceX objects (OST article VIII, Registration Convention article II). Both refer to objects in space and are irrelevant. According to article VI OST, States “bear international responsibility for national activities in outer space”, including Mars, **including those by “non-governmental entities”**. The US, as SpaceX’s state of incorporation, must authorise and continuously supervise SpaceX’s actions in space to ensure compliance with the OST (OST article VI) and international law (OST article III). In practice, this task is done by the US Federal Communications Commission, which licenses and regulates SpaceX. Article VI OST sets a specific rule of attribution, supplementing the customary rules of state responsibility (Stubbe 2017, pp. 85-104). SpaceX acts with US authorisation, and its conduct in space within and beyond that authorisation is attributable to the US (ARSIWA articles 5, 7). In the absence of circumstances precluding wrongfulness, the result is straightforward. If SpaceX breaches a US obligation under international law, the US bears responsibility for an internationally wrongful act.

#### **Private sector is key to make public space development successful. Urrutia ‘18**

(Doris Elin Urrutia, October 12, 2018, Urrutia is a journalist for Inverse that bridge archaeological and paleontological discoveries with modern life. She also writes about astronomy and spaceflight for Space.com and on marine life for Scientific American, “How Will Private Space Travel Transform NASA's Next 60 Years?”, [https://www.space.com/42113-nasa-future-private-spaceflight.html //](https://www.stltoday.com/opinion/columnists/unions-ignore-long-history-of-excluding-minorities-from-jobs/article_ef58bccd-f04a-5172-8dbd-18b8ee5eb9e2.html%20/)NL)

First, people should understand that about **75 percent of the worldwide space enterprise is already commercial**, said Scott Hubbard, an adjunct professor in the Department of Aeronautics and Astronautics at Stanford University. This includes the satellites belonging to DirecTV and Sirius XM radio. “What's new is the extension of that into the human realm," said Hubbard, who also previously directed NASA's Ames Research Center in Silicon Valley. He served as the agency's "Mars czar," restructuring NASA's robotic Red Planet-exploration program after it suffered several failures in the 1990s. And if private companies can get the price of a suborbital flight down to about $50,000, "you get a lot of interest," Hubbard told Space.com. The highest-profile program currently in the works between NASA and the private sector is the agency's Commercial Crew Program, said Eric Stallmer, president of the nonprofit Commercial Spaceflight Federation. Commercial Crew is encouraging the development of U.S. spacecraft that will carry astronauts to and from the International Space Station (ISS). Toward this end, NASA has awarded multibillion-dollar contracts to both SpaceX and Boeing, which are building capsules called Crew Dragon and CST-100 Starliner, respectively. These craft are currently scheduled to start flying astronauts sometime next year. There's also the maturing commercial cargo program, which has given contracts to SpaceX and Northrop Grumman Corp. to fly robotic cargo missions to the ISS. Both of these companies have already completed numerous such flights. Both Hubbard and Stallmer said that **NASA wins by relying on private industry to provide such services in low Earth orbit.** Hubbard argued that this strategy allows the space agency to continue "exploring the fringe where there really is no business case." NASA has a budget about five times larger than the next biggest national space agency out there, but the U.S. agency's ambitious goals are still costly, said Stallmer. **To get the most bang** for the buck, "you'd have to **leverage the innovation and technology that is in the private sector and let NASA do the exquisite" projects.** The "exquisite" projects, Stallmer explained, are the "push-the-envelope-type things on deeper space exploration." "I see it not only as a cooperation or a collaboration, but maybe even interdependence," Hubbard said. "Without a thriving spaceflight entrepreneurship sector, I don't think that deep-space exploration with [regular] people is sustainable," he added. "And I think using the way in which the private sector has demonstrated they can reduce costs, through more nearly assembly-line production techniques, is really critical to sustainable space exploration in the future." Phil McAlister, director of commercial spaceflight at NASA, also advocated these public-private partnerships. Private companies offer the advantages of "being quick, being nimble, being fast, making a decision maybe without perfect knowledge — then moving forward and adjusting as required," McAlister told Space.com. NASA officials, he said, "have a lot of meetings … a lot of discussions, and things tend to take longer" than in private industry. **"The private sector wanting to move fast and wanting to be cost-effective** and NASA having our 50 years of human spaceflight experience … you bring those two things together**, and they actually complement each other very effectively," McAlister said.**

#### 

# **Case**

#### **The standard is maximizing expected well-being –**

**1] Moral uncertainty means preventing extinction should be our highest priority.  
Bostrom 12** [Nick Bostrom. Faculty of Philosophy & Oxford Martin School University of Oxford. “Existential Risk Prevention as Global Priority.” Global Policy (2012)]  
These reflections on **moral uncertainty suggest** an alternative, complementary way of looking at existential risk; they also suggest a new way of thinking about the ideal of sustainability. Let me elaborate.¶ **Our present understanding of axiology might** well **be confused. We may not** nowknow — at least not in concrete detail — what outcomes would count as a big win for humanity; we might not even yet **be able to imagine the best ends** of our journey. **If we are** indeedprofoundly **uncertain** about our ultimate aims,then we should recognize that **there is a great** option **value in preserving** — and ideally improving — **our ability to recognize value and** to **steer the future accordingly. Ensuring** that **there will be a future** version of **humanity** with great powers and a propensity to use them wisely **is** plausibly **the best way** available to us **to increase the probability that the future will contain** a lot of **value.** To do this, we must prevent any existential catastrophe.

#### **2] Independently, extinction turns suffering impacts – mass death causes massive amounts of structural violence**

#### **3] Exclusion is inevitable and non-unique. Slow violence framing means we de-value extinction just as much as extinction-first framing de-values slow violence. Policy is about weighing those trade-offs, so they need to win that theirs are larger.**

#### **4] Governments must use util since they can’t focus on every individual rights violation**

**Goodin** **95 Robert, 1995, Philosopher of Political Theory, Public Policy, and Applied Ethics. Utilitarianism as a Public Philosophy, Cambridge University Press, pg. 26-27**

The great advantage of utilitarianism as a guide to public conduct is that it avoids gratuitous sacrifices, it ensures as best we are able to ensure in the uncertain world of public policy-making that policies are sensitive to people’s interests or desires or preferences. The great failing of more deontological theories, applied to those realms, is that they fixate upon duties done for the sake of duty rather than for the sake of any good that is done by doing one’s duty. Perhaps it is permissible (perhaps it is even proper) for private individuals in the course of their personal affairs to fetishize duties done for their own sake. It would be a mistake for public officials to do likewise, not least because it is impossible. The fixation on motives makes absolutely no sense in the public realm, and might make precious little sense in the private one even, as Chapter 3 shows. The reason public action is required at all arises from the inability of uncoordinated individual action to achieve certain morally desirable ends. Individuals are rightly excused from pursuing those ends. The inability is real; the excuses, perfectly valid. But libertarians are right in their diagnosis, wrong in their prescription. That is the message of Chapter 2. The same thing that makes those excuses valid at the individual level – the same thing that relieves individuals of responsibility – makes it morally incumbent upon individuals to organize themselves into collective units that are capable of acting where they as isolated individuals are not. When they organize themselves into these collective units, those collective deliberations inevitably take place under very different circumstances and their conclusions inevitably take very different forms. Individuals are morally required to operate in that collective manner, in certain crucial respects. But they are practically circumscribed in how they can operate, in their collective mode. And those special constraints characterizing the public sphere of decision-making give rise to the special circumstances that make utilitarianism peculiarly apt for public policy-making, in ways set out more fully in Chapter 4. Government house utilitarianism thus understood is, I would argue, a uniquely defensible public philosophy.

#### **5] Extinction justifies moral loopholes – therefore, ignoring it is unethical.**

**Bok, 1988 (**Sissela Bok, Professor of Philosophy, Brandeis, Applied Ethics and Ethical Theory, Ed. David Rosenthal and Fudlou Shehadi, 1988)

The same argument can be made for Kant’s other formulations of the Categorical Imperative: “So act as to use humanity, both in your own person and in the person of every other, always at the same time as an end, never simply as a means”; and “So act as if you were always through actions a law-making member in a universal Kingdom of Ends.” No one with a concern for humanity could consistently will to risk eliminating humanity in the person of himself and every other or to risk the death of all members in a universal Kingdom of Ends for the sake of justice. To risk their collective death for the sake of following one’s conscience would be, as Rawls said, “irrational, crazy.” And to say that one did not intend such a catastrophe, but that one merely failed to stop other persons from bringing it about would be beside the point when the end of the world was at stake.For although it is true that we cannot be held responsible for most of the wrongs that others commit, the Latin maxim presents a case where we would have to take such a responsibility seriously—perhaps to the point of deceiving, bribing, even killing an innocent person, in order that the world not perish.

#### **Adv 1: Capitalism**

#### **Evaluate ONLY the parts of cap and inequality the aff can solve – I’ll give you a hint: its next to nothing. Do not give them all of the generic cap or inequality impacts they read in the 1AC.**

#### **Vote neg on presumption – space privatization may be an example of neolib, but no chance that they solve it:**

#### **None of their ev is reverse causal – industrial agriculture, the defense industrial base, Amazon, Koch Industries are all examples of capitalism – plus capitalism predates space exploration, which proves they don’t control the root cause**

#### **1AC Penny 20 and Fernandes 18 is a critique of growth mindset writ large – if governments are fundamentally neoliberal, they have the same incentives to appropriate space as private companies – the aff has zero bearing on NASA – means they don’t solve spatial fixes because NASA can appropriate space resources, then sell them to private companies – proven by existing contracts between NASA and NewSpace –**

#### **No brightline for when spatial fixes on Earth are exhausted – corporations will continue extracting resources from Earth even if it’s less lucrative**

#### **No plan text or any solvency warrants/cards is damning – don’t allow new 1AR spins or readings because it shortchanges the entire 1NC**

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#### **2] Root cause claims are wrong- capitalism is key to reducing war and environmental destructions**

**Zitelman, PhD, 21**

(Rainer, <https://nationalinterest.org/feature/terror-consumption-why-capitalism-gets-blamed-everything-194769>, 10-3)

Before the emergence of capitalism, **a majority of the global population was living in extreme poverty**. In 1820, that applied to 90 percent of the people on the planet; today, it is less than 10 percent. And most remarkably: In recent decades, since the end of communism in China and other countries, the decline in poverty has accelerated to a pace unmatched in any previous period of human history. In 1981, the poverty rate amounted to 42.7 percent; by 2000, it had fallen to 27.8 percent, and in 2021 it was only 9.3 percent. There is more good news: the number of child laborers worldwide has dropped significantly, falling from 246 million children in 2000 to 160 million twenty years later in 2020. This is despite the fact that the world population increased from 6.1 to 7.8 billion people over the same two decades. Despite these facts, most people do not like capitalism. The Edelman Trust Barometer 2020, a survey that is conducted in twenty-eight countries, concludes that, on average, 56 percent of respondents believe that “Capitalism as it exists today does more harm than good in the world.” In Europe, people in France were most likely to agree with this statement (69 percent), followed by respondents in Italy (61 percent), Spain (60 percent), Germany (55 percent) and the United Kingdom (53 percent). In both the United States and Canada, 47 percent agreed with this critical assessment of capitalism. **Anti-capitalism is a political religion**. In classical religions, the devil is the prototypical expression of evil in the world. In the political religion of anti-capitalism, capitalism assumes the **role of evil incarnate.** Accordingly, capitalism is not only responsible for all of the evils in society, but also for everyone’s personal problems. People blame capitalism for hunger, poverty, inequality, climate change, pollution, war, alienation, fascism, racism, gender inequality, slavery, colonialism, corruption, crime, mental illness and cultural decay. **Wars were more frequent in pre-capitalist times** than in the period since capitalism came into being. And **numerous scientific studies on “capitalist peace**” have shown that free trade and capitalism reduce the likelihood of military conflicts. Also, there are various studies showing that environmental standards are much better in capitalist than in non-capitalist countries—and there are the facts cited above about the extent to which capitalism has reduced hunger and poverty. So why don’t most people want to hear **these facts?** Well, one reason is that when it comes to topics such as hunger, poverty, climate change and war, it is very difficult to engage in a discussion based on facts. The more emotionally charged a topic is, the less willing people are to acknowledge the facts, especially when they contradict their own personal opinions. Scientists have encountered this phenomenon in many experiments and surveys. In numerous almost identical representative surveys that scientists have conducted over the past decades, respondents were presented with a sheet of paper with a picture and a speech bubble and asked the following question. “I would now like to tell you about an incident that happened the other day at a panel discussion about [then followed various topics such as genetic engineering, climate change, nuclear energy, air pollution, etc., all of which are emotionally polarizing]. Experts were talking about the risks and the state of research. Suddenly, an audience member jumps up and shouts something to the panelists and the audience.” The researchers then asked respondents to look at the person and the speech bubble on the paper that contained the words, “What do I care about numbers and statistics in this context? How can you even talk so coldly when the survival of mankind and our planet is at stake?” Below the speech bubble was a question: Would you say this person is right or wrong? That question was repeatedly asked over a period of twenty-seven years in fifteen different representative surveys on a variety of highly emotive and controversial topics. Invariably, the majority of respondents agreed with the heckler who was not interested in the facts. On average, 54.8 percent said the fact-resistant heckler was right, only 23.4 percent disagreed. **Anti-capitalists cannot be convinced by facts**. If there are too few goods, then capitalism is to blame. The same is true if there are too many goods (“the terror of consumption”). And even when a person goes shopping and can’t find the goods they are looking for, capitalism is to blame. Author Eula Biss is widely celebrated for her novels and begins her book on possession, capitalism, and the value of things, Having and Being Had (2020), with this anecdote: We’re on our way home from a furniture store, again. What does it say about capitalism, John asks, that we have money and want to spend it but we can’t find anything worth buying? We almost bought something called a credenza, but then John opened the drawers and discovered it wasn’t made to last. I think there are limits, I say, to what mass production can produce. Later in the book, the author recounts a conversation with her mother, who asks her if she thinks capitalism is good or bad. She responds with. “I say I’m tempted to think it’s a bad thing but I don’t really know what it is.” For many people, anti-capitalism is an emotional issue. It is a diffuse feeling of protest against the existing order. There is no evil, neither in society nor in my personal life, anti-capitalists say to themselves, that cannot be blamed on the capitalist “system,” even if it is only the fact that I can’t find any furniture to buy.

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### **Adv 2: New Hope**

#### **1] Roberts 21 - Public and private companies must work together to overcome blockages that each industry face, only together can the process be expedited**

**Houser 17** (Kristin Houser is a writer for Futurism , where she covers science and tech. Her written work has appeared in Business Insider, NBC News, and the World Economic Forum’s Agenda, among other publications https://futurism.com/private-companies-not-governments-are-shaping-the-future-of-space-exploration) //HWLND

Private companies may be in the lead, but the finish line for this Space Race isn’t exactly clear. The first iteration was arguably “won” when Neil Armstrong took his first steps on the Moon, so does this sequel end when we establish the first Moon base? When a human walks on Mars? When we leave the solar system? Truthfully, the likelihood of humanity ever calling it a day on space exploration is slim to none. **The universe is huge, with galaxy estimates in the trillions, so the goalpost will continue moving back (to bring another sport into the analogy**). **Rather than focusing on competing in what is ultimately an unwinnable race, private and government-backed space agencies can actually benefit from collaboration thanks to their inherent differences.** “The way that SpaceX, Planetary Resources, or Virgin Galactic approaches space exploration is going to be very different from NASA or the Air Force,” explains Lewicki. Private companies aren’t beholden to the same slow processes that often stall government projects, and they can secure or reallocate funding much more swiftly if need be. However, unlike agencies like NASA, they do have shareholders to keep happy and a need to constantly pursue profitability. **The two sectors, therefore, have a tremendous opportunity to help one another**. **Private companies can generate revenue through government contracts —for example, NASA has contracted Boeing to transport astronauts to the International Space Station (ISS), and SpaceX just closed a deal with the U.S. Air Force to launch its secretive space drone.** This leaves the government agencies free to pursue the kind of forward-thinking, longer-term research that might not immediately generate revenue, but that can be later streamlined and improved upon in the private sector.

**Pizzigati 21**

#### **2] Tons of alt causes to inequality – vaccines, economies, geopolitics, populations, environments, etc**

#### **3] Roberts 21 concedes space gap is Non-unique.**

#### **4] Worst case, space tech benefits rich nations. That’s better than the squo because its not harming lower-income nations. History proves resources are shared the more abundant they are because of things like international treaties and trade, which means private space exploration helps low-income countries**

### **Adv 3: The Thanos Paradox**

**Robinson and O’Keefe 20 - Not Applicable**

**The Neg CP doesn’t advocate Asteroid Mining or Colonization**

**Terminal Defense – eliminates all Aff offense**

**Also mini-steps towards avoiding capitalism don’t work. We’ve already tried that in the past.**

#### **3] Capitalism is inevitable – self-hatred, love for the game, and lack of recognition of subjugation all disprove their thesis. Independently, neoliberal governments crack down on unions which kills aff solvency.**

**Han ’15** [Byung-Chul, “Why revolution is no longer possible”, 10-23-2015, https://www.opendemocracy.net/en/transformation/why-revolution-is-no-longer-possible/]//pranav

Accordingly, I **tried to say why revolution is no longer possible today**. Why is the neoliberal system of domination so stable? Why is there so little resistance to it? Why does the resistance that does occur so quickly come to naught? Why, despite the ever-expanding divide between rich and poor, is revolution no longer possible? To explain this state of affairs, we need a precise understanding of how power and domination function today. **Anyone wishing to install a new system of rule must eliminate resistance**. The same holds for the neoliberal order. **Implementing a new system of dominion requires an instance of power that posits; often, this entails the use of force.** However, power that posits a system is not identical to power that stabilizes a system internally. As is well known, Margaret Thatcher, **the standard bearer of neoliberalism, treated unions as “internal enemies” and combated them violently**. For all that, using force to establish the neoliberal agenda does not amount to system-preserving power. System-preserving power is not repressive, but seductive In disciplinary and industrial society, system-preserving power was repressive. Factory workers were brutally exploited by factory owners. Such violent exploitation of others’ labor entailed acts of protest and resistance. There, it was possible for a revolution to topple the standing relations of production. In that system of repression, both the oppressors and the oppressed were visible. There was a concrete opponent — a visible enemy —and one could offer resistance. The neoliberal system of domination has a wholly different structure. Now, system-preserving power no longer works through repression, but through seduction — that is, it leads us astray. It is no longer visible, as was the case under the regime of discipline. Now, there is no longer a concrete opponent, no enemy suppressing freedom that one might resist. Neoliberalism turns the oppressed worker into a free contractor, an entrepreneur of the self. Today, **everyone is a self-exploiting worker in their own enterprise.** Every individual is master and slave in one. **This also means that class struggle has become an internal struggle with oneself.** Today, anyone who fails to succeed blames themselves and feels ashamed. **People see themselves, not society, as the problem. The subjugated subject is not even aware of its subjugation** Any disciplinary power that expends effort to force human beings into a straitjacket of commandments and prohibitions proves inefficient. **It is significantly more efficient to ensure that people subordinate themselves to domination on their own. The efficacy defining the system today stems from the fact that, instead of operating through prohibition and privation, it aims to please and fulfill**. Instead of making people compliant, it endeavors to make them dependent. This logic of neoliberal efficiency also holds for surveillance. In the 1980s, to cite one example, there were vehement protests against the German national census. Even schoolchildren took to the streets. From today’s perspective, the information requested therein— profession, education levels, and distance from the workplace — seem almost laughable. At the time, people believed that they were facing the state as an instance of domination wresting data from citizens against their will. That time is long past. Today, people expose themselves willingly. Precisely this sense of freedom is what makes protest impossible. In contrast to the days of the census, hardly anyone protests against surveillance. Free self-disclosure and self-exposure follow the same logic of efficiency as free self-exploitation. What is there to protest against? Oneself? Conceptual artist Jenny Holzer has formulated the paradox of the present situation: “Protect me from what I want.” It is important to distinguish between power that posits and power that preserves. Today, power that maintains the system assumes a “smart” and friendly guise. In so doing, it makes itself invisible and unassailable. **The subjugated subject does not even recognize that it has been subjugated. The subject thinks she is free. This mode of domination neutralizes resistance quite effectively. Domination that represses and attacks freedom is not stable. The neoliberal regime proves stable by immunizing itself against all resistance, because it makes use of freedom instead of repressing it.** Suppressing freedom quickly provokes resistance; exploiting freedom does not. After the Asian financial crisis, South Korea stood paralyzed and shocked. The IMF intervened and extended credit. In return, the government had to assert its neoliberal agenda by force. This was repressive, positing power — the kind that often proves violent and differs from system-preserving power, which manages to pass itself off as freedom. According to Naomi Klein, the state of social shock following catastrophes such as the financial crisis in South Korea — or the current crisis in Greece — offers the chance to radically reprogram society by force. Today, there is hardly any resistance in South Korea. Quite the opposite: a vast consensus prevails — as well as depression and burnout. South Korea now has the world’s highest suicide rate. People enact violence on themselves instead of seeking to change society. Aggression directed outward, which would entail revolution, has yielded to aggression directed inward, against oneself. Today, **no collaborative, networked multitude exists that might rise up in a global mass of protest and revolution**. Instead, the prevailing mode of production is based on lonesome and isolated self-entrepreneurs, who are also estranged from themselves. Companies used to compete with each other. Within each enterprise, however, solidarity could occur. Today, everyone is competing against everyone else — and within the same enterprise, too. Even though such competition heightens productivity by leaps and bounds, it destroys solidarity and communal spirit. **No revolutionary mass can arise from exhausted, depressive, and isolated individuals. Neoliberalism cannot be explained in Marxist terms. The famous “alienation” of labor does not even occur. Today, we dive eagerly into work — until we burn out**. The first stage of burnout syndrome, after all, is euphoria. Burnout and revolution are mutually exclusive. **Accordingly, it is mistaken to believe that the Multitude will cast off the parasitic Empire to inaugurate a communist society**.

**TURN: the way we double resources is by exploring space. We can’t double resources if we confine the private sector to Earth, because on Earth resources are FINITE. But the resources are INFINITE.**