I negate the resolution resolved: **The appropriation of outer space by private entities is unjust.**

**My Value is Morality**

This value is always supreme and should always be one of the most important things to consider while judging the round.

[**Gert**, Bernard and Gert, Joshua, "The Definition of Morality", *The Stanford Encyclopedia of Philosophy* (Fall **2017** Edition), Edward N. Zalta (ed.), URL =

<https://plato.stanford.edu/archives/fall2017/entries/morality-definition/>.] Mill (1861: 12) himself explicitly

defines morality as: “the rules and precepts for human conduct, by the observance of which [a happy existence] might be, to the greatest extent possible, secured.”

Morality is important because it justifies what actions are right and wrong. Thus the criterion is

C: Utilitarianism, or maximizing people’s happiness and minimizing peoples pain. This also means we have to try to save peoples lives. This should always be prioritized because people and governments alike should always look to benefit the most people as possible.

## Contention one: Asteroid Mining

**Private companies are key to incentivize asteroid mining**

**Reinstein 99**

Ezra J. Reinstein (JD, Associate at Kirkland & Ellis), Owning Outer Space, 20 Nw. J. Int'l L. & Bus. 59 (1999). JDN. https://scholarlycommons.law.northwestern.edu/njilb/vol20/iss1/7

In the not-too-distant future, however, many of these activities may become economically feasible. The price of launch has decreased 16 due to improved technology and increased competition.7 The price tag on robotic space missions, likely to be the avant garde of space mining endeavors, is one-fourth of what it was six years ago.8 Several real-world companies have begun to plan for the day that launch costs fall to a level at

which they could profit from space mining. SpaceDev, a Colorado-based provider of commercial space missions and small commercial launch vehicles, is currently traded on the over-the-counter stock market.19

If a firm is eventually able to bring ore down to Earth, the total wealth available to humanity will be increased. The estimated Helium-3 reserves on our moon would create, in a controlled fusion reaction, 10 times as much energy as is contained in Earth's recoverable coal, oil, and gas combined.20 What is stopping these companies now, perhaps more than the money or technology, is the uncertainty of the legal regime. If exploitation of outer space's bounty is our goal, we must establish a space property legal system that creates both incentives and predictability. Space development is a highly risky endeavor, as well as mind-bogglingly expensive. Who would expend the effort in developing a space colony, if they were not certain of the project's legality? Valuable projects -- energy collection, mining, and colonization -- are by no means inevitable. If the law of outer space rejects such uses, or even makes their legality uncertain, it is unlikely that the necessary technology would ever be created. A promising solution to our evergrowing energy needs involves setting up giant banks of solar panels in Earth's orbit and on the moon's sunny side, using the solar energy to power space development projects, and then beaming the excess down to Earth as microwave energy for terrestrial use.2 Will a private electric company be willing to develop such a lunar solar collection system? Not without a field of space law that permits exploitation and a strong rate of return on investment. Unless we can impose a rule of law that eliminates uncertainty while permitting the highest possible rate of return, we may be denied access to the fruits of space for a long time to come.

**Asteroid mining protects the environment—it leads to solar-powered satellites and offsets terrestrial extraction**

**Taylor 19**

Chris Taylor is a veteran journalist. Previously senior news writer for Time.com a year later. In 2000, he was named San Francisco bureau chief for Time magazine. He has served as senior editor for Business 2.0, West Coast editor for Fortune Small Business and West Coast web editor for Fast Company. Chris is a graduate of Merton College, Oxford and the Columbia University Graduate School of Journalism. "How asteroid mining will save the Earth — and mint trillionaires." Mashable, 2019, mashable.com/feature/asteroid-mining-space-economy. [QC]

The mission is essential, Joyce declares, to save Earth from its major problems. First of all, the fictional billionaire wheels in a fictional Nobel economist to demonstrate the actual truth that the entire global economy is sitting on a mountain of debt. It has to keep growing or it will implode, so we might as well take the majority of the industrial growth off-world where it can’t do any more harm to the biosphere. Secondly, there’s the climate change fix. Suarez sees asteroid mining as the only way we’re going to build solar power satellites. Which, as you probably know, is a form of uninterrupted solar power collection that is theoretically more effective, inch for inch, than any solar panels on Earth at high noon, but operating 24/7. (In space, basically, it’s always double high noon).

The power collected is beamed back to large receptors on Earth with large, low-power microwaves, which researchers think will be harmless enough to let humans and animals pass through the beam. A space solar power array like the

one China is said to be working on could reliably supply 2,000 gigawatts — or over 1,000 times more power than the largest solar farm currently in existence.

“We're looking at a 20-year window to completely replace human civilization's power infrastructure,” Suarez told me, citing the report of the Intergovernmental Panel on Climate Change on the coming catastrophe. Solar satellite technology “has existed since the 1970s. What we were missing is millions of tons of construction materials in orbit. Asteroid mining can place it there.”

The Earth-centric early 21st century can’t really wrap its brain around this, but the idea is not to bring all that building material and precious metals down into our gravity well. Far better to create a whole new commodities exchange in space. You mine the useful stuff of asteroids both near to Earth and far, thousands of them taking less energy to reach than the moon. That’s something else we’re still grasping, how relatively easy it is to ship stuff in zero-G environments.

**Asteroid mining solves climate change, resource shortages, and environmental degradation – independently its key to space colonization that solves every existential crisis Hlimi 14** [Tina Hlimi, Canadian lawyer with a Bachelors and Masters Degrees in Environmental Sciences from McGill University, 2014, “THE NEXT FRONTIER: AN OVERVIEW OF THE LEGAL AND ENVIRONMENTAL IMPLICATIONS OF NEAR-EARTH ASTEROID MINING,” ANNALS OF AIR AND SPACE LAW,

https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2546924]/Kankee

A. THE ENVIRONMENTAL BENEFITS OF NEAR EARTH ASTEROID HARVESTING Let us recapitulate what we have already found. Shortage of resources is not a fact; it is an illusion born of ignorance. Scientifically and technically feasible improvements in launch vehicles will make departure from Earth **easy** and **inexpensive**. Once we have a foothold in space, the mass of the **asteroid belt** will be at our **disposal**, permitting us to provide for the material needs of a **million times** as many people as Earth can hold. **Solar power** can provide all the energy needs of this vast civilisation (10,000,000 billion people) from now **until the Sun expires**. Using less than one percent of the helium-3 energy resources of Uranus and Neptune for fusion propulsion, we could send a **billion interstellar arks**, each containing **a billion people**, to the stars. There are about a billion Sun-like stars in our galaxy. We have the resources to **colonise** the **entire Milky Way**. 122 In addition to demystifying the legal doctrine governing outer space natural resource appropriation it is also necessary to weigh the benefits and detriments of space-faring activities. Foremost, States around the world are developing at **unprecedented rates** and the human population is mounting in conjunction with demand for natural resources to sustain the current and newly established western standard of living. One of the fastest growing nations, China, is experiencing unhindered growth facilitated by **fossil fuel** use from coal and extensive mining. This has caused **substantial** water, soil and air degradation. In the face of these troubles, NEA mining could be the **key** to preserving the Earth's bounty and replenishing contaminated water supplies. The influx of natural resources could **thwart** the burning of dirty coal and fossil fuels, thereby **mitigating** the effects of **climate change**, such as, rising sea level, atmospheric pollution, melting of sea ice and rising temperatures. NEA harvesting could also protect the ocean

and the fragile and largely unexplored deep seabeds 123 from oil and gas drilling. It could furthermore protect ecosystems from rare-earth mineral mining predominantly used to fuel the electronics sector. 124 NEA mining is especially pertinent as China restricted its global exports of rare-earth minerals in 2009, incongruously citing the need to protect the environment. Unfortunately, the supply cuts have forced dependent States like Japan, the United States and South Korea to heighten rare-Earth mineral exploration. This accordingly led to Japan's 2011 discovery of rare-earth minerals in the ocean-bed deposits of the Pacific Exclusive Economic Zone (PEEZ) thereby necessitating risky, deep-sea mining techniques, which may result in marine pollution if not carefully designed and developed. Other States, which have joined the **environmentally destructive** rare-earth mineral exploration movement include India, Canada, Tanzania, Australia, Brazil and Vietnam., There is accordingly much competition and exploration for rare-earth minerals which could result in **significant exploitation** of untouched areas like the PEEZ seabed and Mongolia.125 Other regions which may soon be targeted for mineral and hydrological resources include Antarctica and the Arctic. With the advent of technological advances, environmentally destructive practices such as refining may soon occur in outer space, **sparing the Earth** of pollution. 126 Accordingly, NEA mining is a viable technology for preserving the Earth's environment by curbing atmospheric and marine pollution, enhancing water supply and quality and mitigating the effects of climate change; all while allowing humankind to maintain and even improve their standard of living through increased technologies, consumption and population growth. B. THE ENVIRONMENTAL CONSEQUENCES OF NEAR EARTH ASTEROID MINING

**Asteroid Mining decreases the burning of fossil fuels- which have a huge impact on the world today**

**Chaisson 21**

February 19, 2021 Clara Chaisson. “Fossil Fuel Air Pollution Kills One in Five People.” NRDC, 16 Nov. 2021,

https://www.nrdc.org/stories/fossil-fuel-air-pollution-kills-one-five-people.

If the consequences of burning fossil fuels—like melting glaciers, rising seas, and increasing global temperature averages—feel too far-flung or abstract, consider the fundamental act of taking a breath of air. A new study has found that air pollution from fossil fuels is responsible for nearly one in every five deaths worldwide. Scientists have known for years about the deadly impacts of fossil fuel combustion, but a new peer-reviewed study published in Environmental Research puts the global death toll is more than twice that of previous estimates. According to the research, exposure to fine particulate matter, or PM 2.5, from burning fossil fuels was responsible for about 8.7 million deaths globally in 2018. That’s roughly the same number of people living in New York City or London. Or, to put this health crisis into further perspective, fossil fuel pollution is not only fueling the climate crisis but it also kills more people each year than HIV, tuberculosis, and malaria combined. “We don’t appreciate that air pollution is an invisible killer,” Neelu Tummala, an ear, nose, and throat physician at George Washington University School of Medicine and Health Sciences, recently told The Guardian. “The air we breathe impacts everyone’s health but particularly children, older individuals, those on low incomes, and people of color. Usually people in urban areas have the worst impacts.” PM 2.5 is any airborne particle that is up to 2.5 microns in diameter—or about one-thirtieth the width of a single human hair. Particles this tiny are problematic because they linger in the air, are readily inhaled, and can penetrate deep into the lungs, where they can enter the bloodstream and inflict damage on multiple organs. Links between this type of pollution and a wide range of serious health problems, such as cardiovascular disease, cancer, tissue damage, and asthma and other respiratory ailments are well documented. Inhaling high levels of PM 2.5 is especially dangerous for young children, whose organs and immune responses are still developing and who breathe in more air—and thus, more pollution—relative to their body weight than adults do. Exposure to air pollution has also been contributing to the disproportionate COVID-19 infection and death rates among people of color in the United States

CONTENTION 2: Innovation

**Private entities are necessary for space-to-space market development which spurs unlimited innovation - the plan stops this bc the majority of human made tech in space is in the LEO. Weinzierl and Sarang 21**; Matt Weinzierl and Mehek Sarang, 2-12-2021, "The Commercial Space Age Is Here," Harvard Business Review, https://hbr.org/2021/02/the-commercial-space-age-is-here (Matt Weinzierl is the Joseph and Jacqueline Elbling Professor of Business Administration at HBS and a Research Associate at the NBER. His research and teaching focus on the design of economic policy and the economics and business of space. Mehak Sarang is a Research Associate at Harvard Business School and the Lunar Exploration Projects Lead for the MIT Space Exploration Initiative.) //Aadit

There’s no shortageofhypesurrounding the commercial space industry. But while tech leaders promise us moon bases and settlements on Mars, the space economy has thus far remained distinctly local — at least in a cosmic sense. Last year, however,we crossed an important threshold: For the first time in human history,humans accessedspacevia a vehicle built and owned not by any government, but by a privatecorporation with its sights set on affordable space settlement. It was the first significant

step towards building an economy both in space and for space. The implications — for business, policy, and society at large — are hard to overstate. In 2019, 95% of the estimated $366 billion in revenue earned in the space sector was from the space-for-earth economy: that is, goods or services produced in space for use on earth. The space-for-earth economy includes telecommunications and internet infrastructure, earth observation capabilities, national security satellites, and more. This economy is booming, and though research shows that it faces the challenges of overcrowding and monopolization that tend to arise whenever companies compete for a scarce natural resource, projections for its future are optimistic. Decreasing costs for launch and space hardware in general have enticed new entrants into this market, and companies in a variety of industries have already begun leveraging satellite technology and access to space to drive innovation and efficiency in their earthbound products and services. In contrast, the space-for-space economy — that is, goods and services produced in space for use in space, such as mining the Moon or asteroids for material with which to construct in-space habitats or supply refueling depots — has struggled to get off the ground. As far back as the 1970s, research commissioned by NASA predicted the rise of a space-based economy that would supply the demands of hundreds, thousands, even millions of humans living in space, dwarfing the space-for-earth economy (and, eventually, the entire terrestrial economy as well). The realization of such a vision would change how all of us do business, live our lives, and govern our societies — but to date, we’ve never even had more than 13 people in space at one time, leaving that dream as little more than science fiction. Today, however, there is reason to think that we may finally be reaching the first stages of a true space-for-space economy. SpaceX’s recent achievements (in cooperation with NASA), as well as upcoming efforts by Boeing, Blue Origin, and Virgin Galactic to put people in space sustainably and at scale, mark the opening of a new chapter of spaceflightled byprivatefirms. These firms have both the intention and capability to bring private citizens to space as passengers, tourists, and — eventually — settlers, opening the door forbusinesses to start meeting the demand those peoplecreate over the next several decades with an array of space-for-space goods and services.Welcome to the (Commercial) Space Age In our recent research, we examined how the model of centralized, government-directed human space activity born in the 1960s has, over the last two decades, made way for a new model, in which public initiatives in space . Centralized,government-led space programs will inevitably focus on space-for-earth activities thatare in the public interest, such asnational security,basic science, and nationalpride. This is only natural, as expenditures for these programs must be justified by demonstrating benefits for citizens — and the citizens these governments represent are (nearly) all on earth. In contrast to governments, the private sectoriseagerto put people in space to pursue their own personal interests, not the state’s — and then supply the demand they create. This is the vision driving SpaceX, which in its first

twenty years has entirely upended the rocket launch industry, securing 60% of the global commercial launch market and building ever-larger spacecraft designed to ferry passengers not just to the International Space Station (ISS), but also to its own promised settlement on Mars. Today, the space-for-space market is limitedto supplying the people who are already in space: that is, the handful of astronauts employed by NASA and other government programs. While SpaceX has grand visions of supporting large numbers of private space travelers, their current space-for-space activities have all been in response to demand from government customers (i.e., NASA). But asdecreasing launch costs enable companies like SpaceX to leverage economies of scale and put more people into space, growing private sector demand (that is, tourists and settlers, rather than government employees) could turn these proof-of-concept initiatives into a sustainable, large-scale industry. This model — of selling to NASA with the hopes of eventually creating and expanding into a larger

private market — is exemplified by SpaceX, but the company is by no means the only player taking this approach. For instance, while SpaceX is focused on space-for-space transportation, another key component of this burgeoning industry will be manufacturing. Made In Space, Inc. has been at the forefront of manufacturing “in space, for space” since 2014, when it 3D-printed a wrench onboard the ISS. Today, the company is exploring other products, such as high-quality fiber-optic cable, that terrestrial customers may be willing to pay to have manufactured in zero-gravity. But the company also recently received a $74 million contract to 3D-print large metal beams in space for use on NASA spacecraft, and future private sector spacecraft will certainly have similar manufacturing needs which Made In Space hopes to be well-positioned to fulfill. Just as SpaceX has begun by supplying NASA but hopes to eventually serve a much larger, private-sector market, Made In Space’s current work with NASA could be the first step along a path towards supporting a variety of private-sector manufacturing applications for which the costs of manufacturing on earth and transporting into space would be prohibitive. Another major area of space-for-space investment is in building and operating space infrastructure such as

habitats, laboratories, and factories. Axiom Space, a current leader in this field, recently announced that it would be flying the “first fully private commercial mission to space” in 2022 onboard SpaceX’s Crew Dragon Capsule. Axiom was also awarded a contract for exclusive access to a module of the ISS, facilitating its plans to develop modules for commercial activity on the station (and eventually, beyond it). This infrastructure is likely to spur investment in a wide array of complementary services to supply the demand of the people living and working within it. For example, in February 2020, Maxar Technologies was awarded a $142 million contract from NASA to develop a robotic construction tool that would be assembled in space for use on low-Earth orbit spacecraft. Private sector spacecraft or settlements will no doubt have need for a variety of similar construction and repair tools. And of course, the private sector isn’t just about industrial products. Creature comforts also promise to be an area of rapid growth, as companies endeavor to support the human side of life in the harsh environment of space. In 2015, for example, Argotec and Lavazza collaborated to build an espresso machine that could function in the zero-gravity environment of the ISS, delivering a bit of everyday luxury to the crew. To be sure, people have dreamt of using the vacuum and weightlessness of space to source or make things that cannot be made on earth for half a century, and time and again the business case has failed to pan out. Skepticism is natural. Those failures, however, have been in space-for-earth applications. For example, two startups of the 2010s, Planetary Resources, Inc. and Deep Space Industries, recognized the potential of space mining early on. For both companies, however, the lack of a space-for-space economy meant that their near-term survival depended on selling mined material — precious metals or rare elements — to earthbound customers. When it became clear that demand was insufficient to justify the high costs, funding dried up, and both companies pivoted to other ventures. These were failures of space-for-earth business models — but the demand for in-space mining of raw building material, metals, and water will be enormous once humans are living in space (and are therefore far cheaper to supply). In other words, when people are living and working in space, we are likely to look back on these early asteroid mining companies less as failures and more as simply ahead of their time. Seizing the Space-for-Space Opportunity The opportunity presented by the space-for-space economy is huge — but it could easily be missed. To seize this moment, policymakers must provide regulatory and institutional frameworks that willenable the risk-taking and innovation necessary for a decentralized, private-sector-driven space economy. There are three specific policy areas we believe will be especially important:1. Enabling private individuals to take on greater risk than would be tolerable for government-employed astronauts. First, as part of a general shift to that more decentralized,

market-oriented space sector, policymakers should consider allowing private space tourists and settlers to voluntarily take on more risk than states would tolerate for government-employed astronauts. In the long run, ensuring high safety levels will be essential to convince larger numbers of people to travel or live in space, but in the early years of exploration, too great an aversion to risk will stop progress before it starts. An instructive analogy can be found in how NASA works with its contractors: In the mid-2000s, NASA shifted from using cost-plus contracts (in which NASA shouldered all the economic risk of investing in space) to fixed-price contracts (in which risk was distributed between NASA and their contractors). Because of private companies’ greater tolerance for risk, this

shift catalyzed a burst of activity in the sector — sometimes referred to as “New Space.” A similar shift in how we approach voluntary risk-taking by private-sector astronauts may be necessary in order to launch the space-for-space economy. 2. Judiciously implementing government regulation and support. Second, as with most markets, developing a stable space economy will depend on judicious government regulation and support. NASA and the U.S. Commerce and State Departments’ recent recommitment to “create a regulatory environment in [low-Earth orbit] that enables American commercial activities to thrive” is a good sign that the government is on a path of continued collaboration with industry, but there’s still a long way to go. Governments should start by clarifying how property rights over limited resources such as water on Mars, ice on the Moon, or orbital slots (i.e., “parking spots” in space) will be governed. Recent steps — including NASA’s offer to purchase lunar soil and rocks, last April’s Executive Order on the governance of space resources, and the 2015 Commercial Space Launch Competitiveness Act — indicate that the U.S. government is interested in establishing some form of regulatory framework to support the economic development of space. In 2017, Luxembourg became the first European country to establish a legal framework securing private rights over resources mined in space, and similar steps have been taken at the domestic level in Japan and the United Arab Emirates. Moreover, nine countries (though Russia and China are notably missing) have signed the Artemis Accords, which lay out a vision for the sustainable, international development of the Moon, Mars, and asteroids. These are important first steps, but they have yet to be clearly translated into comprehensive treaties that govern the fair use and allocation of scarce space resources among all major spacefaring nations. In addition, governments should continue to fill the financial gaps in the still-maturing space-for-space economic ecosystem by funding basic scientific research in support of sending humans to space, and by providing contracts to space startups. Similarly, while excessive regulation will stifle the industry, some government incentives, such as policies to reduce space debris, can help reduce the costs of operating in space for everyone in ways that would be difficult to coordinate independently. 3. Moving beyond geopolitical rivalries. Finally, the development of the space-for-space economy must not be undermined by earthly geopolitical rivalries, such as that between the United States and China. These conflicts will unavoidably extend into space at least to some extent, and military demand has long been an important source of funding for aerospace companies. But if not kept in check, such rivalries will not only distract attention and resources from borderless commercial pursuits but also create barriers and risks that hamper private investment. On earth, private economic activity has long tied together people whose states are at odds. The growing space-for-space economy offers exceptional potential to be such a force for unity — but it’s the job of the world’s governments not to get in the way. A collaborative, international approach to establishing — and enforcing — the rule of law in space will be essential to encouraging a healthy space-for-space economy.

**Innovation solves Extinction.**

**Matthews 18** Dylan Matthews 10-26-2018 “How to help people millions of years from now”

https://www.vox.com/future-perfect/2018/10/26/18023366/far-future-effective-altruism-existential-risk-doing-good (Co-founder of Vox, citing Nick Beckstead @ Rutgers University)//Re-cut by Elmer

If you care about improving human lives, you should overwhelmingly care about those quadrillions of lives rather than the comparatively small number of people alive today. The 7.6 billion people now living, after all, amount to less than 0.003 percent of the population that will live in the future. It’s reasonable to suggest that those quadrillions of future people have, accordingly, hundreds of thousands of times more moral weight than those of us living here today do. That’s the basic argument behind Nick Beckstead’s 2013 Rutgers philosophy dissertation, “On the overwhelming importance of shaping the far future.” It’s a glorious mindfuck of a thesis, not least because Beckstead shows very convincingly that this is a conclusion any plausible moral view would reach. It’s not just something that weird utilitarians have to deal with. And Beckstead, to his considerable credit, walks the walk on this. He works at the Open Philanthropy Project on grants relating to the far future and runs a charitable fund for donors who want to prioritize the far future. And arguments from him and others have turned “long-termism” into a very vibrant, important strand of the effective altruism community. But what does prioritizing the far future even mean? The most literal thing it could mean is preventing human extinction, to ensure that the species persists as long as possible. For the long-term-focused effective altruists I know, that typically means identifying concrete threats to humanity’s continued existence — like unfriendly artificial intelligence, or a pandemic, or global warming/out of control geoengineering — and engaging in activities to prevent that specific eventuality. But in a set of slides he made in 2013, Beckstead makes a compelling case that while that’s certainly part of what caring about the far future entails, approaches that address specific threats to humanity (which he calls “targeted” approaches to the far future) have to complement “broad” approaches, where instead of trying to predict what’s going to kill us all, you just generally try to keep civilization running as best it can, so that it is, as a whole, well-equipped to deal with potential extinction events in the future, not just in 2030 or 2040 but in 3500 or 95000 or even 37 million. In other words,

caring about the far future doesn’t mean just paying attention to low-probability risks of total annihilation; it also means acting on pressing needs now. For example: We’re going to be **better prepared** to prevent extinction from **AI** or a **supervirus** or **global warming** if society as a whole makes **a lot of scientific progress**. And a significant bottleneck there is that the vast majority of humanity doesn’t get

## high-enough-quality education to engage in scientific research, if they want to, which reduces the odds that we have enough trained scientists to come up with the breakthroughs we need as a civilization to survive and thrive. So maybe one of the best things we can do for the far future is to improve school systems — here and now — to harness the group economist Raj Chetty calls “lost Einsteins” (potential innovators who are thwarted by poverty and inequality in rich countries) and, more importantly, the hundreds of millions of kids in developing countries dealing with even worse education systems than those in depressed communities in the rich world. What if living ethically for the far future means living ethically now? Beckstead mentions some other broad, or very broad, ideas (these are all his descriptions): Help make computers faster so that people everywhere can work more efficiently Change intellectual property law so that technological innovation can happen more quickly Advocate for open borders so that people from poorly governed countries can move to better-governed countries and be more productive Meta-research: improve incentives and norms in academic work to better advance human knowledge Improve education Advocate for political party X to make future people have values more like political party X ”If you look at these areas (economic growth and technological progress, access to information, individual capability, social coordination, motives) a lot of everyday good works contribute,” Beckstead writes. “An implication of this is that a lot of everyday good works are good from a broad perspective, even though hardly anyone thinks explicitly in terms of far future standards.” Look at those examples again: It’s just a list of what normal altruistically motivated people, not effective altruism folks, generally do. Charities in the US love talking about the lost opportunities for innovation that poverty creates. Lots of smart people who want to make a difference become scientists, or try to work as teachers or on improving education policy, and lord knows there are plenty of people who become political party operatives out of a conviction that the moral consequences of the party’s platform are good. All of which is to say: Maybe effective altruists aren’t that special, or at least maybe we don’t have access to that many specific and weird conclusions about how best to help the world. If the far future is what matters, and generally trying to make the world work bett

## Case

**Privately owned satellite operators key for debris removal.**

**Moore 21**, Adrian. “It's Time For US To Get Serious About Cleaning Up Space Junk,”.” TheHill. July 27, 2021. Web. December 13, 2021. <https://thehill.com/opinion/technology/564945-

its-time-for-us-to-get-serious-about-cleaning-up-space-junk>.

Orbital debris management is not well organized within the government. Right now, the Department of Defense (DOD) does most tracking of space debris for the U.S. out of the need to protect military satellites and national security interests. NASA has its own less advanced systems for tracking debris. However, orbital debris management is not just about tracking debris anymore. It is also about forming collision warning systems and safely managing traffic in space. To do this efficiently, we need a civil repository for all orbital debris components, something that many commercial space companies have already created on their own to stay aware of orbital debris and help protect their satellites in space. Tracking debris may be a national security priority, but providing space traffic control is not really in the Defense Department’s mission. We should be utilizing the private sector’s expertise and advancements in this area. For example, Astroscale has contracts with both the Japanese and European space agencies to develop orbital debris removal capability. And responsibility for developing collision warnings and space traffic management would be best suited for the Office of Space Commerce, an office with existing connections to the commercial space industry, NASA and DOD. Partnering with the debris tracking and removal systems private companies are developing while freeing up DOD to focus on military awareness and NASA to focus on research and development would be the most efficient way forward. If government works with private industry through strategic public-private partnerships, the U.S. can best address the threats posed by orbital debris and create sustainable policies for safe space exploration.

Analysis: allowing Private companies to pursue appropriation gives opportunity to declutter space debris >> if just leave it the way it is nothing happens and still risks a chance of collision