The role of the ballot is to vote for the debater who links the most contention level offense to the winning normatively justified framework. Prefer:

1. Constitutivism: LD was designed as distinct from other events, i.e. why we have frameworks. Proven by the fact that if no one reads a role of the ballot, but it was a Kant AC v a Util NC you would evaluate the round by seeing who has the most offense to the winning framework. This non uniques benefits to other role of the ballots because we can get them in policy debate or outside of the round.

2. Inclusion: My role of the ballot lets you read whatever framework you want and by extension talk about whatever impacts you want, you just have to justify your framework and compare it to mine. Any other role of the

ballot arbitrarily excludes my offense.

3. Voting on another role of the ballot collapses to mine because by voting aff for something like “they won the role of the ballot debate and linked the most offense back to it” concedes my structure of debate that we should vote for whoever links offense to a winning system of framing.

# Framing

**The standard is maximizing expected well-being.**

#### 1. Each individual’s intrinsic equal worth mandates that we maximize the lives and liberties of as many as possible.

**2. Extinction comes first under any framework – it has infinite magnitude and life is a prerequisite to moral systems.**

Thus, I negate. I defend the status quo.

# Off - Asteroid Mining

**Commercial asteroid mining is coming now – lower costs and improving tech make it economically viable – and the legal basis is already in place**

**Gilbert 21** alex gilbert, is a complex systems researcher and a PhD student in space resources at the Colorado School of Mines. "Mining in Space Is Coming." Milken Institute Review, April 26, 2021, [www.milkenreview.org/articles/mining-in-space-is-coming](http://www.milkenreview.org/articles/mining-in-space-is-coming). [Quality Control]

**Space exploration is back**. after decades of disappointment, a combination of better technology, falling costs and a rush of competitive energy from the private sector has put space travel **front and center**. indeed, many analysts (even some with their feet on the ground) believe that commercial developments in the space industry may be on the cusp of starting the largest resource rush in history: **mining on the Moon**, Mars and **asteroids**.

While this may sound fantastical, some baby steps toward the goal have already been taken. Last year, NASA awarded contracts to four companies to extract small amounts of lunar regolith by 2024, effectively **beginning the era of commercial space mining**. Whether this proves to be the dawn of a gigantic adjunct to mining on earth — and more immediately, a key to unlocking cost-effective space travel — will turn on the answers to a host of questions ranging from what resources can be efficiently.

As every fan of science fiction knows, the resources of the solar system appear **virtually unlimite**d compared to those on Earth. There are whole other planets, dozens of moons, thousands of massive asteroids and millions of small ones that doubtless contain humungous quantities of materials that are scarce and very valuable (back on Earth). Visionaries including Jeff Bezos imagine heavy industry moving to space and Earth becoming a residential area. However, as entrepreneurs look to harness the riches beyond the atmosphere, access to space resources remains tangled in the realities of economics and governance.

Start with the fact that space belongs to no country, complicating traditional methods of resource allocation, property rights and trade. With limited demand for materials in space itself and the need for huge amounts of energy to return materials to Earth, creating a viable industry will turn on major advances in technology, finance and business models.

That said, there’s no grass growing under potential pioneers’ feet. Potential economic, scientific and even security benefits underlie an emerging geopolitical competition to pursue space mining. The United States is rapidly emerging as a front-runner, in part due to its ambitious Artemis Program to lead a multinational consortium back to the Moon. But it is also a leader in **creating a legal infrastructure for mineral exploitation**. The United States has adopted the world’s first spaceresources law, recognizing the property rights of private companies and individuals to materials gathered in space.

However, the United States is hardly alone. Luxembourg and the United Arab Emirates (you read those right) are racing to codify space-resources laws of their own, hoping to attract investment to their entrepot nations with business-friendly legal frameworks. China reportedly views space-resource development as a national priority, part of a strategy to challenge U.S. economic and security primacy in space. Meanwhile, Russia, Japan, India and the European Space Agency all harbor space-mining ambitions of their own. Governing these emerging interests is an outdated treaty framework from the Cold War. Sooner rather than later, we’ll need new agreements to facilitate private investment and ensure international cooperation.

What’s Out There

Back up for a moment. For the record, space is already being heavily exploited, because space resources include non-material assets such as orbital locations and abundant sunlight that enable satellites to provide services to Earth. Indeed, satellite-based telecommunications and global positioning systems have become indispensable infrastructure underpinning the modern economy. Mining space for materials, of course, is another matter.

In the past several decades, planetary science has confirmed what has long been suspected: celestial bodies are potential sources for dozens of natural materials that, in the right time and place, are **incredibly valuable**. Of these, water may be the most attractive in the near-term, because — with assistance from solar energy or nuclear fission — H2O can be split into hydrogen and oxygen to make **rocket propellant**, facilitating in-space refueling. So-called “**rare earth” metals** are also **potential targets** of asteroid miners intending to service Earth markets. Consisting of 17 elements, including lanthanum, neodymium, and yttrium, these critical materials (most of which are today mined in China at great environmental cost) **are required for electronic**s. **And they loom as bottlenecks in making the transition from fossil fuels to renewables backed up by battery storage.**

**Only the private sector can do asteroid mining.**

**Thiessen 21**

Marc Thiessen, 6-1, 21, Washington Post, Opinion: SpaceX’s success is one small step for man, one giant leap for capitalism,

https://www.washingtonpost.com/opinions/2020/06/01/spacexs-success-is-one-small-step-man-one-gia nt-leap-capitalism/

It was one small step for man, one giant leap for capitalism. Only three countries have ever launched human beings into orbit. This past weekend, SpaceX became the first private company ever to do so, when it sent its Crew Dragon capsule into space aboard its Falcon 9 rocket and docked with the International Space Station. This was accomplished by a company Elon Musk started in 2002 in a California strip mall warehouse with just a dozen employees and a mariachi band. At a time when our nation is debating the merits of socialism, SpaceX has given us an **incredible testament to the power of American free enterprise.** While the left is advocating unprecedented government intervention in almost every sector of the U.S. economy, from health care to energy, **today Americans are celebrating the successful privatization of space travel.** If you want to see the difference between what government and private enterprise can do, consider: It took a private company to give us the first space vehicle with touch-screen controls instead of antiquated knobs and buttons. It took a private company to give us a capsule that can fly entirely autonomously from launch to landing — including docking — without any participation by its human crew. It also took a private company to invent a reusable rocket that can not only take off but land as well. When the Apollo 11 crew reached the moon on July 20, 1969, Neil Armstrong declared “the Eagle has landed.” On Saturday, SpaceX was able to declare that the Falcon had landed when its rocket settled down on a barge in the Atlantic Ocean — ready to be used again. That last development will save the taxpayers incredible amounts of money. **The cost to NASA** for launching a man into space on the space shuttle orbiter was **$170 million per seat, compared with just $60 million** to $67 million on the Dragon capsule. The cost for the space shuttle **to send a kilogram of cargo into to space was $54,500; with the Falcon rocket, the cost is just $2,720 — a decrease of 95 percent.** And while the space shuttle cost $27.4 billion to develop, **the Crew Dragon was** designed and built for just $1.7 **billion — making it the lowest-cost spacecraft developed in six decades.** SpaceX did it in six years — far faster than the time it took to develop the space shuttle. **The private sector does it better, cheaper, faster and more efficiently than government. Why? Competition.** Today, SpaceX has to compete with a constellation of private companies — including legacy aerospace firms such as Orbital ATK and United Launch Alliance and innovative start-ups such as Blue Origin (which is designing a Mars lander and whose owner, Jeff Bezos, also owns The Post) and Virgin Orbit (which is developing rockets than can launch satellites into space from the underside of a 747, avoiding the kinds of weather that delayed the Dragon launch). In the race to put the first privately launched man into orbit, upstart SpaceX had to beat aerospace behemoth Boeing and its Starliner capsule to the punch. It did so — for more than $1 billion less than its competitor. **That spirit of** **competition and innovation will revolutionize space travel in the years ahead.** Indeed, Musk has his sights set far beyond Earth orbit. Already, SpaceX is working on a much larger version of the Falcon 9 reusable rocket called Super Heavy that will carry a deep-space capsule named Starship capable of carrying up to 100 people to the moon and eventually to Mars. Musk’s goal — the reason he founded SpaceX — is to colonize Mars and make humanity a multiplanetary species. He has set a goal of founding a million-person city on Mars by 2050 complete with iron foundries and pizza joints. Can it be done? Who knows. But this much is certain: **Private-sector innovation is opening the door to a new era of space exploration**. Wouldn’t it be ironic if, just as capitalism is allowing us to explore the farthest reaches of our solar system, Americans decided to embrace socialism back here on Earth?

**Asteroid mining offsets terrestrial growth that ruins the environment and enables solar power satellites – both solve climate change**

**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. [Quality Control]

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 rare earth metal depletion – prevents tech stagnation and unsustainable resource extraction**

**Mitchell 20** Robin Mitchell is an electronic engineer who has been involved in electronics since the age of 13. After completing a BEng at the University of Warwick, Robin moved into the field of online content creation developing articles. "How might asteroid mining be key to electronics future?" 28-09-2020, [www.electropages.com/blog/2020/09/how-might-asteroid-mining-be-key-electronics-future](http://www.electropages.com/blog/2020/09/how-might-asteroid-mining-be-key-electronics-future). [Quality Control]

As electronics continue to become increasingly more important in everyday life, so is the ability to **produce electronic components**. With the supply of minerals on Earth having a finite size, some are worried that Earth will soon run out of critical resources such as **platinum and lithium**. What are asteroids, what are they composed of, and could they be the key to providing humanity with a near-infinite source of minerals?

What minerals are commonly needed for electronics?

Since the introduction of the first commercial circuits, electronics have become incredibly advanced with silicon dies having billions of active components, resistors the size of dust specks, and capacitors that can hold obscene amounts of charge for their size. However, many of these components rely on minerals that most will never have heard of for them to be able to work. Basic components such as resistors and capacitors use common materials including iron, carbon, and aluminium, but components such as LEDs, silicon dies, and thin-film displays use lanthanum, cerium, neodymium, and europium. While many of these minerals **fall under the “rare-earth” category**, that does not necessarily mean that they are rare; but many are.

Why are these minerals running out?

Minerals that are rare by nature are uncommon in the crust, and mass industrialisation is quickly using up remaining reserves of these minerals. However, it is important to understand what reserve means and how reserves are calculated. Let’s take Uranium as an example to understand this concept better; as things currently stand, there are 80 years of Uranium reserves left. Now, this does not mean that all the uranium will be used up globally in 80 years, this means that at the current price of Uranium, proven sources will continue to supply Uranium at a profitable rate for 80 years. When all reserves are used up, the price for that mineral increases, and this makes areas that used to be unprofitable more profitable, thus generating new reserves.

However, there is another aspect to resources that need to be considered; **environmental damage**. A good example to demonstrate this is Lithium. While Lithium is rather abundant in the crust, it is spread very wide, making most crust uneconomical to mine. If all cars on earth went electric, the proven reserves of Lithium would run out in 3 years. Of course, new reserves would be made available, and this would extend the ability to use Lithium in industrial practices. However, mining Lithium has a massive environmental impact and sees vast amounts of land destroyed and made toxic due to by-products in the extraction process. The same applies to many rare minerals; many tons of earth is needed to get even the smallest quantity.

What are asteroids, and what are they made of?

Asteroids are small cosmic bodies that orbit a star and can range in size, density, and composition. One of the largest asteroids in the Solar System, Vesta, has a diameter approximately 330 miles, while some of the smallest can be just two meters across. Asteroids mostly consist of rock as well as minerals, but their exact composition greatly varies. For example, M-type asteroids are those that mostly consist of nickel-iron, while C-type asteroids consist of clay and silicate rocks. Other minerals that are often found in asteroids include gold, cobalt, palladium, platinum, and osmium.

Could asteroid mining be the key to ensuring limitless supplies?

While asteroids themselves may contain trace amounts of rare minerals, their size and lack of an ecosystem **would allow for a mining operation to destroy an entire asteroid with no repercussions.** Asteroids are also plentiful in the Solar System, and would most likely **provide humanities resource needs for millions of years.** For perspective, the total weight of the asteroid belt is only 3% that of the moon, but that is still 2.39×1021 kilograms. Even then, that is only the asteroid belt and does not consider stray asteroids that orbit the sun, planets, and rings around Saturn / Jupiter.

**Both of those cause extinction**

**Bell 19** Aidan Bell is the co-founder of EnviroBuild, a sustainable building materials company based in London. PhD from Manchester in Inorganic Chemistry. "The Conflict of Tech Innovation and Sustainability." TechNative, 22 Jan. 2019, technative.io/the-conflict-of-tech-innovation-and-sustainability. [Quality Control]

Technological advancement has existed throughout human history

Humans have walked the Earth for 200,000 years, inventing **countless new processes and systems along the way.** The somewhat gradual expansion of human knowledge exploded after the burgeoning of agriculture in the Middle Eastern region of the Levant around 12,000 years ago. Societies at this time manipulated their environment for food-crop cultivation for the first time, inventing sophisticated activities like irrigation and logging.

This nascent field of agriculture created more food and thereby lead to a rapid increase in population size. Yet human expansion also resulted in the increased degradation of the environment. Experts theorise that the mass extinction of megafauna across North America and Australasia was the result of humans rather than environmental factors, while the Mayans were also at fault for causing widespread deforestation and a severe drought through excessive logging, a mistake that brought their eventual demise.

The exploration and proliferation of new technologies is the **inevitable result of human intelligence**, and the consequences thereof have always been difficult to avoid. Yet our awareness of this damage places humanity in a position of knowledge outside the standard predator-prey relationship that otherwise dominates the world and results in starvation for animals that overeat their food sources.

The current technological dilemmas that we face today are similar to those of ancient time**.  Overuse of a resource for immediate human benefit risks longer-term negative influence**.  A report conducted by Greenpeace found that Internet data centres have incredibly large carbon footprints, accounting for 3% of global electricity use, much of it in locations that offer cheap, but dirty, electricity. Likewise, the minerals that are found in electronic devices like mobile phones, such as tantalum and gold, often originate from unregulated mining that releases harmful substances into the surrounding soil, air and water. Mining also contributes hugely to **deforestation**, which is responsible for 15% of global greenhouse gas emissions.

The negative impacts of technological innovation are increasing and action needs to be **taken soon to resolve this crisis for the sake of future generations.** The Intergovernmental Panel on Climate Change (IPCC) report last month warned that we have just 12 years to reduce the rate of global warming before widespread flooding and droughts become unavoidable. The demand for minerals and energy brought about by technological advancements shows no sign of slowing down, painting a worrying picture for the future of the planet.

Faced with the consequences of our intelligence, humanity now has to use its **incredible versatility** to overcome the challenges it has created for itself. For example, wind and solar power are increasingly becoming economically-viable sources of unlimited, free electricity and provide us with the opportunity to reduce our dependence on harmful fossil fuels. Bioengineering should help us protect surface soils and the ecosystems that depend on them by maintaining healthy levels of nutrients and soil salinity. **Technological advancements will even help us prevent species extinction events** that would **otherwise destroy our Earth altogethe**r, with NASA already developing spacecraft to push approaching asteroids out of our orbit.

# Case

**Empirical evidence proves anti-cap is the root cause, not the other way around. Prefer the devil you know**

**Feyman 14** Yevgeniy [adjunct fellow at the Manhattan Institute. He writes on health care policy, entitlement reform, and the Affordable Care Act. His research has focused on a variety of topics, including the physician shortage, the cost of health care reform, and consumer-directed health care. Feyman was previously the deputy director of health policy at the Manhattan Institute and is currently a research assistant in the department of health policy at the Harvard T.H. Chan School of Public Health] “The Golden Age Is Now” May 23, 2014. IB

In How Much Have Global Problems Cost the World? Lomborg and a group of economists conclude that, with a few exceptions, the world is richer, freer, healthier, and smarter than it’s ever been. These gains have coincided with the near-universal rejection of statism and the flourishing of capitalist principles. At a time when political figures such as New York City mayor Bill de Blasio and religious leaders such as Pope Francis frequently remind us about the evils of unfettered capitalism, this is a worthwhile message. The doubling of human life expectancy is one of the most remarkable achievements of the past century. Consider, Lomborg writes, that “the twentieth century saw life expectancy rise by about 3 months for every calendar year.” The average child in 1900 could expect to live to just 32 years old; now that same child should make it to 70. This increase came during a century when worldwide economic output, driven by the spread of capitalism and freedom, grew by more than 4,000 percent. These gains occurred in developed and developing countries alike; among men and women; and even in a sense among children, as child mortality plummeted. Why are we living so much longer? Massive improvements in public health certainly played an important role. The World Health Organization’s global vaccination efforts essentially eradicated smallpox. But this would have been impossible without the innovative methods of vaccine preservation developed in the private sector by British scientist Leslie Collier. Oral rehydration therapies and antibiotics have also been instrumental in reducing child mortality. Simply put, technological progress is the key to these gains—and market economies have liberated, and rewarded, technological innovation. People are not just living longer, but better—sometimes with government’s help, and sometimes despite it. Even people in the developing countries of Africa and Latin America are better educated and better fed than ever before. Hundreds of thousands of children who would have died during previous eras due to malnutrition are alive today. Here, we can thank massive advancements in agricultural production unleashed by the free market. In the 1960s, privately funded agricultural researchers bred new, high-yield strains of corn, wheat, and various other crops thanks to advances in molecular genetics. Globalization helped spread these technologies to developing countries, which used them not only to feed their people, but also to become export powerhouses. This so-called “green revolution” reinforced both the educational progress (properly nourished children tend to learn more) and the life-expectancy gains (better nutrition leads to better health) of the twentieth century. These children live in a world with fewer armed conflicts, netting what the authors call a “peace dividend.” Globalization and trade liberalization have surely contributed to this more peaceful world (on aggregate). An interdependent global economy makes war costly. Of course, problems remain. As Lomborg points out, most foreign aid likely does little to boost economic welfare, yet hundreds of billions of dollars in “development assistance” continue to flow every year from developed countries to the developing world. Moreover, climate change is widely projected to intensify in the second half of the twenty-first century, and will carry with it a significant economic cost. But those familiar with the prior work of the “skeptical environmentalist” understand that ameliorating these effects over time could prove wasteful. Lomborg notes that the latest research on climate change estimates a net cost of 0.2 to 2 percent of GDP from 2055 to 2080. The same report points out that in 2030, mitigation costs may be as high as 4 percent of GDP. Perhaps directing mitigation funding to other priorities—curing AIDS for instance—would be a better use of the resources. Lomborg’s main message? Ignore those pining for the “good old days.” Thanks to the immense gains of the past century, there has never been a better time to be alive.

**Rejection of capitalism causes massive transition wars**

**Harris 3.** Lee, Analyst – Hoover Institution and Author of The Suicide of Reason, “The Intellectual Origins of America-Bashing”, Policy Review, January, http://www.hoover.org/publications/policyreview/3458371.html

This is the immiserization thesis of Marx. And it is central to revolutionary Marxism, since if capitalism produces no widespread misery, then it also produces no fatal internal contradiction: If everyone is getting better off through capitalism, who will dream of struggling to overthrow it? Only genuine misery on the part of the workers would be sufficient to overturn the whole apparatus of the capitalist state, simply because, as Marx insisted, the capitalist class could not be realistically expected to relinquish control of the state apparatus and, with it, the monopoly of force. In this, Marx was absolutely correct. No capitalist society has ever willingly liquidated itself, and it is utopian to think that any ever will. Therefore, in order to achieve the goal of socialism, nothing short of a complete revolution would do; and this means, in point of fact, a full-fledged civil war not just within one society, but across the globe. Without this catastrophic upheaval, capitalism would remain completely in control of the social order and all socialist schemes would be reduced to pipe dreams.

**Turns their impact – the transition magnifies every flaw of capitalism**

**Gurbud 97.** Mark Avrum, Graduate Research Assistant – Center for Superconductivity Research at the University of Maryland, “Nanotechnology and International Security”, http://www.foresight.org/Conferences/MNT05/Papers/Gubrud/)

With molecular manufacturing, international trade in both raw materials and finished goods can be replaced by decentralized production for local consumption, using locally available materials. The decline of international trade will undermine a powerful source of common interest. Further, artificial intelligence will displace skilled as well as unskilled labor. A world system based on wage labor, transnational capitalism and global markets will necessarily give way. We imagine that a golden age is possible, but we don’t know how to organize one. As global capitalism retreats, it will leave behind a world dominated by politics, and possibly feudal concentrations of wealth and power. Economic insecurity, and fears for the material and moral future of humankind may lead to the rise of demagogic and intemperate national leaders. With almost two hundred sovereign nations, each struggling to create a new economic and social order, perhaps the most predictable outcome is chaos: shifting alignments, displaced populations, power struggles, ethnic conflicts inflamed by demagogues, class conflicts, land disputes, etc. Small and underdeveloped nations will be more than ever dependent on the major powers for access to technology, and more than ever vulnerable to sophisticated forms of control or subversion, or to **outright domination**. Competition among the leading technological powers for the political loyalty of clients might imply reversion to some form of nationalistic imperialism.