### UH R3 1NC

### Framing

#### The standard is utilitarianism

Moen 16 [Ole Martin Moen, Research Fellow in Philosophy at University of Oslo “An Argument for Hedonism” Journal of Value Inquiry (Springer), 50 (2) 2016: 267–281] SJDI // RCT by JPark

Let us start by observing, empirically, that a widely shared judgment about intrinsic value and disvalue is that pleasure is intrinsically valuable and pain is intrinsically disvaluable. On virtually any proposed list of intrinsic values and disvalues (we will look at some of them below), pleasure is included among the intrinsic values and pain among the intrinsic disvalues. This inclusion makes intuitive sense, moreover, for there is something undeniably good about the way pleasure feels and something undeniably bad about the way pain feels, and neither the goodness of pleasure nor the badness of pain seems to be exhausted by the further effects that these experiences might have. “Pleasure” and “pain” are here understood inclusively, as encompassing anything hedonically positive and anything hedonically negative.2 The special value statuses of pleasure and pain are manifested in how we treat these experiences in our everyday reasoning about values. If you tell me that you are heading for the convenience store, I might ask: “What for?” This is a reasonable question, for when you go to the convenience store you usually do so, not merely for the sake of going to the convenience store, but for the sake of achieving something further that you deem to be valuable. You might answer, for example: “To buy soda.” This answer makes sense, for soda is a nice thing and you can get it at the convenience store. I might further inquire, however: “What is buying the soda good for?” This further question can also be a reasonable one, for it need not be obvious why you want the soda. You might answer: “Well, I want it for the pleasure of drinking it.” If I then proceed by asking “But what is the pleasure of drinking the soda good for?” the discussion is likely to reach an awkward end. The reason is that the pleasure is not good for anything further; it is simply that for which going to the convenience store and buying the soda is good.3 As Aristotle observes: “We never ask [a man] what his end is in being pleased, because we assume that pleasure is choice worthy in itself.”4 Presumably, a similar story can be told in the case of pains, for if someone says “This is painful!” we never respond by asking: “And why is that a problem?” We take for granted that if something is painful, we have a sufficient explanation of why it is bad. If we are onto something in our everyday reasoning about values, it seems that pleasure and pain are both places where we reach the end of the line in matters of value.

#### Extinction First:

#### 1] Actor spec—governments must use util because they don’t have intentions and are constantly dealing with tradeoffs—this outweighs since different agents have different obligations and takes out impact calculus indicts since they are empirically denied.

#### 2] Reversibility- we can’t improve society if we are all dead

#### 3] Suffering- death causes suffering when people can’t get access to resources and necessities

#### 4] Moral uncertainty – we’ve been fighting about ethics for thousands of years but can’t come to a conclusion – preserving life is first

#### Extinction outweighs under any framework

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

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

### Water Shortage DA

#### Climate change makes water shortages inevitable – that causes hydro-political conflict escalation which goes nuclear

Harvey 8/17 [(Fiona, the Guardian's environment correspondent, won the Foreign Press Association award for Environment Story of the Year and the British Environment and Media Awards journalist of the year) “Global water crisis will intensify with climate breakdown, says report,” The Guardian, 8/17/2021] JL

Mark’s words should be a call to attention, and a call to action. The plight of farmers in Australia illustrates a larger reality: As planetary temperatures continue to increase and rainfall patterns shift due to human-caused climate disruption, our ability to grow crops and have enough drinking water will become increasingly challenged, and the outlook is only going to worsen.

The most recent United Nations Intergovernmental Panel on Climate Change report warned of increasingly intense droughts and mass water shortages around large swaths of the globe.

But even more conservative organizations have been sounding the alarm. “Water insecurity could multiply the risk of conflict,” warns one of the World Bank’s reports on the issue. “Food price spikes caused by droughts can inflame latent conflicts and drive migration. Where economic growth is impacted by rainfall, episodes of droughts and floods have generated waves of migration and spikes in violence within countries.”

Meanwhile, a study published in the journal Global Environmental Change, looked at how “hydro-political issues” — including tensions and potential conflicts — could play out in countries expected to experience water shortages coupled with high populations and pre-existing geopolitical tensions.

The study warned that these factors could combine to increase the likelihood of water-related tensions — potentially escalating into armed conflict in cross-boundary river basins in places around the world by 74.9 to 95 percent. This means that in some places conflict is practically guaranteed.

These areas include regions situated around primary rivers in Asia and North Africa. Noted rivers include the Tigris and Euphrates, the Indus, the Nile, and the Ganges-Brahmaputra.

Consider the fact that 11 countries share the Nile River basin: Egypt, Burundi, Kenya, Eritrea, Ethiopia, Uganda, Rwanda, Sudan, South Sudan, Tanzania and the Democratic Republic of Congo. All told, more than 300 million people already live in these countries, — a number that is projected to double in the coming decades, while the amount of available water will continue to shrink due to climate change.

For those in the US thinking these potential conflicts will only occur in distant lands — think again. The study also warned of a very high chance of these “hydro-political interactions” in portions of the southwestern US and northern Mexico, around the Colorado River.

Potential tensions are particularly worrisome in India and Pakistan, which are already rivals when it comes to water resources. For now, these two countries have an agreement, albeit a strained one, over the Indus River and the sharing of its water, by way of the 1960 Indus Water Treaty.

However, water claims have been central to their ongoing, burning dispute over the Kashmir region, a flashpoint area there for more than 60 years and counting.

The aforementioned treaty is now more strained than ever, as Pakistan accuses India of limiting its water supply and violating the treaty by placing dams over various rivers that flow from Kashmir into Pakistan.

In fact, a 2018 report from the International Monetary Fund ranked Pakistan third among countries facing severe water shortages. This is largely due to the rapid melting of glaciers in the Himalaya that are the source of much of the water for the Indus.

To provide an idea of how quickly water resources are diminishing in both countries, statistics from Pakistan’s Islamabad Chamber of Commerce and Industry from 2018 show that water availability (per capita in cubic meters per year) shrank from 5,260 in 1951, to 940 in 2015, and are projected to shrink to 860 by just 2025.

In India, the crisis is hardly better. According to that country’s Ministry of Statistics (2016) and the Indian Ministry of Water Resources (2010), the per capita available water in cubic meters per year was 5,177 in 1951, and 1,474 in 2015, and is projected to shrink to 1,341 in 2025.

Both of these countries are nuclear powers. Given the dire projections of water availability as climate change progresses, nightmare scenarios of water wars that could spark nuclear exchanges are now becoming possible.

#### Asteroid mining solves water access – only NEOs are sufficiently proximate and hydrated

Tillman 19 [(Nola Taylor, has been published in Astronomy, Sky & Telescope, Scientific American, New Scientist, Science News (AAS), Space.com, and Astrobiology magazine, BA in Astrophysics) “Tons of Water in Asteroids Could Fuel Satellites, Space Exploration,” Space, 9/29/2019] JL

When it comes to mining space for water, the best target may not be the moon: Entrepreneurs' richest options are likely to be asteroids that are larger and closer to Earth.

A recent study suggested that roughly 1,000 water-rich, or hydrated, asteroids near our planet are easier to reach than the lunar surface is. While most of these space rocks are only a few feet in size, more than 25 of them should be large enough to each provide significant water. Altogether, the water locked in these asteroids should be enough to fill somewhere around 320,000 Olympics-size swimming pools — significantly more than the amount of water locked up at the lunar poles, the new research suggested.

Because asteroids are small, they have less gravity than Earth or the moon do, which makes them easier destinations to land on and lift off from. If engineers can figure out how to mine water from these space rocks, they could produce a source of ready fuel in space that would allow spacecraft designers to build refuelable models for the next generation of satellites. Asteroid mining could also fuel human exploration, saving the expense of launching fuel from Earth. In both cases, would-be space-rock miners will need to figure out how to free the water trapped in hydrated minerals on these asteroids.

"Most of the hydrated material in the near-Earth population is contained in the largest few hydrated objects," Andrew Rivkin, an asteroid researcher at Johns Hopkins University Applied Physics Research Laboratory in Maryland, told Space.com. Rivkin is the lead author on the paper, which estimated that near Earth asteroids could contain more easily accessible water than the lunar poles.

According to the United Nations Office for Outer Space Affairs, more than 5,200 of the objects launched into space are still in orbit today. While some continue to function, the bulk of them buzz uselessly over our heads every day. They carry fuel on board, and when they run out, they are either lowered into destructive orbits or left to become space junk, useless debris with the potential to cause enormous problems for working satellites. Refueling satellites in space could change that model, replacing it with long-lived, productive orbiters.

"It's easier to bring fuel from asteroids to geosynchronous orbit than from the surface of the Earth," Rivkin said. "If such a supply line could be established, it could make asteroid mining very profitable."

Hunting for space water from the surface of the Earth is challenging because the planet's atmosphere blocks the wavelength of light where water can be observed. The asteroid warming as it draws closer to the sun can also complicate measurements.

Instead, Rivkin and his colleagues turned to a class of space rocks called Ch asteroids. Although these asteroids don't directly exhibit a watery fingerprint, they carry the telltale signal of oxidized iron seen only on asteroids with signatures of water-rich minerals, which means the authors felt confident assuming that all Ch asteroids carry this rocky water.

Based on meteorite falls, a previous study estimated that Ch asteroids could make up nearly 10% of the near-Earth objects (NEOs). With this information, the researchers determined that there are between 26 and 80 such objects that are hydrated and larger than 0.62 miles (1 km) across.

Right now, only three NEOs have been classified as Ch asteroids, although others have been spotted in the asteroid belt. Most NEOs are discovered and observed at wavelengths too short to reveal the iron band that marks the class. Carbon-rich asteroids, which include Ch asteroids and other flavors, are also darker than the more common stony asteroids, making them more challenging to observe.

Although Ch asteroids definitely contain water-rich minerals, that doesn’t necessarily mean that they will always be the best bet for space mining. It comes down to risk. Would an asteroid-mining company rather visit a smaller asteroid that definitely has a moderate amount of water, or a larger one that could yield a larger payday but could also come up dry?

"Whether getting sure things with no false positives, like the Ch asteroids, is more important or if a greater range of possibilities is acceptable with the understanding that some asteroids will be duds is something the miners will have to decide," Rivkin said.

In addition to estimating the number of large, water-rich asteroids might be available, the study also found that as many as 1,050 smaller objects, roughly 300 feet (100 meters) across, may also linger near Earth. Their small bulk will make them easier to mine because their low gravity will require less fuel to escape from, but they will produce less water overall, and Rivkin expects that the handful of larger space rocks will be the first targets.

"It seems likely that the plan for these companies will be to find the largest accessible asteroid with mineable material with the expectation that it will be more cost-effective than chasing down a large number of smaller objects," Rivkin said. "How 'accessible' and 'mineable material' and 'cost-effective' are defined by each company is to be seen."

### Mining DA

#### Mining is happening now

Gilbert 4-26 [Alex Gilbert is a complex systems researcher and a PhD student in space resources at the Colorado School of Mines. Milken Institute, “Mining in Space Is Coming”; <https://www.milkenreview.org/articles/mining-in-space-is-coming>] kelvin / rct LH

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 unlimited 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 space resources 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 electronics. And they loom as bottlenecks in making the transition from fossil fuels to renewables backed up by battery storage.

The Moon is a prime space mining target. Boosted by NASA’s mining solicitation, it is likely the first location for commercial mining. The Moon has several advantages. It is relatively close, requiring a journey of only several days by rocket and creating communication lags of only a couple seconds — a delay small enough to allow remote operation of robots from Earth. Its low gravity implies that relatively little energy expenditure will be needed to deliver mined resources to Earth orbit.

The Moon may look parched — and by comparison to Earth, it is. But recent probes have confirmed substantial amounts of water ice lurking in permanently shadowed craters at the lunar poles. Further, it seems that solar winds have implanted significant deposits of helium-3 (a light stable isotope of helium) across the equatorial regions of the Moon. Helium-3 is a potential fuel source for second and third-generation fusion reactors that one hopes will be in service later in the century. The isotope is packed with energy (admittedly hard to unleash in a controlled manner) that might augment sunlight as a source of clean, safe energy on Earth or to power fast spaceships in this century. Between its water and helium-3 deposits, the Moon could be the resource stepping-stone for further solar system exploration.

Asteroids are another near-term mining target. There are all sorts of space rocks hurtling through the solar system, with varying amounts of water, rare earth metals and other materials on board. The asteroid belt between the orbits of Mars and Jupiter contains most of them, many of which are greater than a kilometer in diameter. Although the potential water and mineral wealth of the asteroid belt is vast, the long distance from Earth and requisite travel times and energy consumption rule them out as targets in the near term.

Even the surface of celestial bodies pose a challenge to mining machinery since they consist of unconsolidated rocky materials called regolith instead of more familiar soil.

Wannabe asteroid miners will thus be looking at smaller near-Earth asteroids. While they are much further away than the Moon, many of them could be reached using less energy — and some are even small enough to make it technically possible to tow them to Earth orbit for mining.

Space mining may be essential to crewed exploration missions to Mars. Given the distance and relatively high gravity of Mars (twice that of the Moon), extraction and export of minerals to Earth seems highly unlikely. Rather, most resource extraction on Mars will focus on providing materials to supply exploration missions, refuel spacecraft and enable settlement.

Technology Is the Difference

The prospects for space mining are being driven by technological advances across the space industry. The rise of reusable rocket components and the now-widespread use of off-the-shelf parts are lowering both launch and operations costs. Once limited to government contract missions and the delivery of telecom satellites to orbit, private firms are now emerging as leaders in developing “NewSpace” activities — a catch-all term for endeavors including orbital tourism, orbital manufacturing and mini-satellites providing specialized services. The space sector, with a market capitalization of $400 billion, could grow to as much as $1 trillion by 2040 as private investment soars.

But despite the high-profile commercial advances, governments still call the shots on the leading edge of space resource technologies. The United States extracted the first extraterrestrial materials in space from the Moon during the Apollo missions, followed by the Soviet Union’s recoveries from crewless Luna missions. President Biden recently borrowed one of the Apollo lunar rocks for display in the Oval Office, highlighting the awe that deep space can still summon.

For the time being, scientific samples remain the goal of mining. Last October, NASA’s OSIRIS-REx mission — due to return to Earth in 2023 — collected a small amount of material from the asteroid Bennu. In December, Japan returned a sample of the asteroid Ryugu with the Hayabusa2 spacecraft. And several weeks later, China’s Chang’e 5 mission returned the first lunar samples since the 1970s.

Sample collection is accelerating, with recent missions targeting Mars. Japan is planning to visit the two moons of Mars and extract a sample from one. NASA’s robotic Perseverance rover will collect and cache drilled samples on Mars that could later be returned to Earth. Perseverance also carries gear for the unique MOXIE experiment on Mars — an attempt to produce oxygen on the planet with technologies that could eventually extract oxygen for astronauts to breath and refuel spacecraft.It’s about as wide as the Eiffel Tower is tall and it could be where we obtain the elements needed to power bases on the moon, Mars or in orbit one day.

#### Private entities are key to space mining – research, investment, and more

Krishnan 20 [C A Krishnan, 8-6-2020, "Space mining: Just around the corner?," Week, <https://www.theweek.in/news/sci-tech/2020/08/06/Space-mining-Just-around-the-corner.html> [accessed 12-6-21] lydia // rct LH

A Mars mission carrying 100 metric tons cargo in 2022 followed by a manned mission by 2024 are the immediate milestones of Elon Musk’s SpaceX plan which aims to create a self sustaining Mars city by 2050. Just a few decades back this would have sounded as fantasy, but today it looks as if this time frame may actually be bettered. Space missions are set to undergo revolutionary changes and Elon Musk’s vision and timelines are indicators of this. Space is increasingly being seen as a treasure trove of precious minerals and also a place for future human habitation beyond the earth. Global private space industry investors believe that space mining has the potential to shape and define the 21st Century. NASA estimates that the 'Asteroid belt’ holds minerals worth quintillion of dollars. American astrophysicist Neil Degrasse Tyson believes, “The first trillioners will be those who mine asteroids”. The “Main Asteroid Belt” is located between the orbits of Mars and Jupiter, about 450 to 650 million Kilometers from earth, with million asteroids in it. Over the decades, apart from Moon and Mars, governments and private agencies have been carrying out extensive research and studying asteroids for their composition, possibility of mining them and their mining value —Asteriod ‘Bennu’ has been assessed at $670 million and asteroid ‘2011 UW158’ at $ 5.7 trillion. Transportation of the mined resources for utilisation, however, poses major hurdles. A ‘BBC Future’ report by Sarah Cruddas puts the cost of shipping a ton of water into space at about $ 50 million. As per Chris Lewicki, president of Planetary Resources, an asteroid mining company, it takes more energy to escape the first 300 kilometers from the Earth than the next 300 million kilometers. Similarly, bringing back anything more than a few kilograms of samples from space to the Earth would be even more complex in terms of logistics. To start with, therefore, global space industry investors are focusing on keeping mined space resources in space itself for ‘in situ resource utilisation’. Availability of water on the Moon, Mars and asteroids offer very attractive prospects; apart from being crucial for supporting life and growing food, it also opens the possibility of using its constituents, hydrogen and oxygen, for making rocket fuel. Today, the possibility of manufacturing tools and even building habitats on Moon or Mars with the help of 3D printers using iron, nickel, cobalt, gold, platinum, and iridium etc which are available on the Moon, Mars and asteroids seem within reach. Researchers are working on using regolith, the weathered rock particles found on lunar surface for making moon bricks using 3D printers. These bricks will form the basic construction material for the first moon station and even the first moon hotel. Space industry players believe that an investment of $ 4 billion in water mining in space can generate annual revenue worth about $2.4 billion. Similarly, there is a new community of customers who are already looking for buying propellant in space. American space launch provider, United Launch Alliance (ULA), a Lockheed Martin and Boeing joint venture that provides launch rockets, has made it known that, ULA is willing to pay about $ 3000 a Kg for propellant in low earth orbit. Fast paced developments are taking place in the field of space mining technology with private players in the lead. Optical mining using concentrated sunlight, robotics, automated mining applications, advanced drilling machines etc are just a few examples. Participation of private players has reduced the investment burden and greatly enhanced the width and pace of innovation. It is believed that launch of the first asteroid mining vehicle as well as setting up of the first fuelling stations on the Moon and in low earth orbit could become a reality within a decade. Japanese mission ‘Hayabusa’ was the first to bring samples from an asteroid to earth in 2010. ‘Hayabusa - 2’ made its rendezvous with the near earth asteroid ‘162173 RYUGU’ in June 2018, left the asteroid after collecting samples in November 2019 and will be back on earth on December 6, 2020. Similarly the NASA mission OSIRIS-REx, costing about $ 1 billion, launched in 2016 is due to return to earth with samples of asteroid ‘101955 Bennu’ on September 24, 2023. The latest US space mission, ‘Perseverance’ launched on July 30, 2020 will land on Mars on February 18, 2021. It will be using a helicopter on Mars, set to be the first use of a helicopter outside the earth. Apart from collecting samples from Mars and search for signs of habitable conditions on Mars, it will also test the possibility of manufacturing molecular oxygen from the carbon dioxide-rich Mars atmosphere. Beyond the technological capability, there are, however, complex legal issues. While making fuel and water in space and its ‘in situ resource utilisation’ may pass the scrutiny, commercial exploitation of space through minerals mining, tourism, real estate etc may prove hugely contentious in terms of international legal framework for space. The current legal frameworks were adopted when space activities were entirely within the domain of national governments and were confined to research alone. But with the nature of space activities moving from purely research activities to military applications to commercial activities and with the entry of private players and a new community of consumers in space, the vintage outer space treaty has been rendered grossly inadequate; vagueness of the treaty does not cater for the ‘new types of uses’ or the ‘new users’ of space. Louis de Gouyon Matignon, in a thesis on the subject observed that “some states have already taken the absence of express prohibition as a sign that the utilisation of space resources is permissible, and both the USA and Luxembourg recently adopted national legislations expressly allowing it”. This has, however, triggered a response from the international community denouncing such unilateral initiatives and recommending a collective approach on the lines of the laws for high seas and deep sea bed. Whether a widely acceptable new space treaty comes through or not, Space mining is a reality and the early entrants are likely to retain monopoly and huge economic advantages for a very long time.

#### Commercial mining solves extinction from scarcity, climate, terror, war, and disease – solves the aff.

Pelton 17—(Director Emeritus of the Space and Advanced Communications Research Institute at George Washington University, PHD in IR from Georgetown). Pelton, Joseph N. 2017. The New Gold Rush: The Riches of Space Beckon! Springer. Accessed 8/30/19.

Are We Humans Doomed to Extinction? What will we do when Earth’s resources are used up by humanity? The world is now hugely over populated, with billions and billions crammed into our overcrowded cities. By 2050, we may be 9 billion strong, and by 2100 well over 11 billion people on Planet Earth. Some at the United Nations say we might even be an amazing 12 billion crawling around this small globe. And over 80 % of us will be living in congested cities. These cities will be ever more vulnerable to terrorist attack, natural disaster, and other plights that come with overcrowding and a dearth of jobs that will be fueled by rapid automation and the rise of artifi cial intelligence across the global economy. We are already rapidly running out of water and minerals. Climate change is threatening our very existence. Political leaders and even the Pope have cautioned us against inaction. Perhaps the naysayers are right. All humanity is at tremendous risk. Is there no hope for the future? This book is about hope. We think that there is literally heavenly hope for humanity. But we are not talking here about divine intervention. We are envisioning a new space economy that recognizes that there is more water in the skies that all our oceans. Th ere is a new wealth of natural resources and clean energy in the reaches of outer space—more than most of us could ever dream possible. There are those that say why waste money on outer space when we have severe problems here at home? Going into space is not a waste of money. It is our future. It is our hope for new jobs and resources. The great challenge of our times is to reverse public thinking to see space not as a resource drain but as the doorway to opportunity. The new space frontier can literally open up a “gold rush in the skies.” In brief, we think there is new hope for humanity. We see a new a pathway to the future via new ventures in space. For too long, space programs have been seen as a money pit. In the process, we have overlooked the great abundance available to us in the skies above. It is important to recognize there is already the beginning of a new gold rush in space—a pathway to astral abundance. “New Space” is a term increasingly used to describe radical new commercial space initiatives—many of which have come from Silicon Valley and often with backing from the group of entrepreneurs known popularly as the “space billionaires.” New space is revolutionizing the space industry with lower cost space transportation and space systems that represent significant cost savings and new technological breakthroughs. “New Commercial Space” and the “New Space Economy” represent more than a new way of looking at outer space. These new pathways to the stars could prove vital to human survival. If one does not believe in spending money to probe the mysteries of the universe then perhaps we can try what might be called “calibrated greed” on for size. One only needs to go to a cubesat workshop, or to Silicon Valley or one of many conferences like the “Disrupt Space” event in Bremen, Germany, held in April 2016 to recognize that entrepreneurial New Space initiatives are changing everything [ 1 ]. In fact, the very nature and dimensions of what outer space activities are today have changed forever. It is no longer your grandfather’s concept of outer space that was once dominated by the big national space agencies. The entrepreneurs are taking over. The hopeful statements in this book and the hard economic and technical data that backs them up are more than a minority opinion. It is a topic of growing interest at the World Economic Forum, where business and political heavyweights meet in Davos, Switzerland, to discuss how to stimulate new patterns of global economic growth. It is even the growing view of a group that call themselves “space ethicists.” Here is how Christopher J. Newman, at the University of Sunderland in the United Kingdom has put it: Space ethicists have offered the view that space exploration is not only desirable; it is a duty that we, as a species, must undertake in order to secure the survival of humanity over the longer term. Expanding both the resource base and, eventually, the habitats available for humanity means that any expenditure on space exploration, far from being viewed as frivolous, can legitimately be rationalized as an ethical investment choice. (Newman) On the other hand there are space ethicists and space exobiologists who argue that humans have created ecological ruin on the planet—and now space debris is starting to pollute space. Th ese countervailing thoughts by the “no growth” camp of space ethicists say we have no right to colonize other planets or to mine the Moon and asteroids—or at least no right to do so until we can prove we can sustain life here on Earth for the longer term. However, for most who are planning for the new space economy the opinion of space philosophers doesn’t really fl oat their boat. Legislators, bankers, and aspiring space entrepreneurs are far more interested in the views of the super-rich capitalists called the space billionaires. A number of these billionaires and space executives have already put some very serious money into enterprises intent on creating a new pathway to the stars. No less than five billionaires with established space ventures—Elon Musk, Paul Allen, Jeff Bezos, Sir Richard Branson, and Robert Bigelow—have invested millions if not billions of dollars into commercializing space. They are developing new technologies and establishing space enterprises that can bring the wealth of outer space down to Earth. This is not a pipe dream, but will increasingly be the economic reality of the 2020s. These wealthy space entrepreneurs see major new economic opportunities. To them space represents the last great frontier for enterprising pioneers. Th us they see an ever-expanding space frontier that offers opportunities in low-cost space transportation, satellite solar power satellites to produce clean energy 24h a day, space mining, space manufacturing and production, and eventually space habitats and colonies as a trajectory to a better human future. Some even more visionary thinkers envision the possibility of terraforming Mars, or creating new structures in space to protect our planet from cosmic hazards and even raising Earth’s orbit to escape the rising heat levels of the Sun in millennia to come. Some, of course, will say this is sci-fi hogwash. It can’t be done. We say that this is what people would have said in 1900 about airplanes, rocket ships, cell phones and nuclear devices. The skeptics laughed at Columbus and his plan to sail across the oceans to discover new worlds. When Thomas Jefferson bought the Louisiana Purchase from France or Seward bought Alaska, there were plenty of naysayers that said such investment in the unknown was an extravagant waste of money. A healthy skepticism is useful and can play a role in economic and business success. Before one dismisses the idea of an impending major new space economy and a new gold rush, it might useful to see what has already transpired in space development in just the past five decades. The world’s first geosynchronous communications satellite had a throughput capability of about 500 kb / s. In contrast, today’s state of the art Viasat 2 —a half century later— has an impressive throughput of some 140 Gb/s. Th is means that the relative throughput is nearly 300,000 greater, while its lifetime is some ten times longer (Figs. 1.1 and 1.2 ). Each new generation of communications satellite has had more power, better antenna systems, improved pointing and stabilization, and an extended lifetime. And the capabilities represented by remote sensing satellites , meteorological satellites , and navigation and timing satellites have also expanded their capabilities and performance in an impressive manner. When satellite applications first started, the market was measured in millions of dollars. Today commercial satellite services exceed a quarter of a billion dollars. Vital services such as the Internet, aircraft traffi c control and management, international banking, search and rescue and much, much more depend on application satellites. Th ose that would doubt the importance of satellites to the global economy might wish to view on You Tube the video “If Th ere Were a Day Without Satellites?” [ 2 ]. Let’s check in on what some of those very rich and smart guys think about the new space economy and its potential. (We are sorry to say that so far there are no female space billionaires, but surely this, too, will come someday soon.) Of course this twenty-fi rst century breakthrough that we call the New Space economy will not come just from new space commerce. It will also come from the amazing new technologies here on Earth. Vital new terrestrial technologies will accompany this cosmic journey into tomorrow. Information technology, robotics, artificial intelligence and commercial space travel systems have now set us on a course to allow us humans to harvest the amazing riches in the skies—new natural resources, new energy, and even totally new ways of looking at the purpose of human existence. If we pursue this course steadfastly, it can be the beginning of a New Space renaissance. But if we don’t seek to realize our ultimate destiny in space, Homo sapiens can end up in the dustbin of history—just like literally millions of already failed species. In each and every one of the five mass extinction events that have occurred over the last 1.5 billion years on Earth, some 50–80 % of all species have gone the way of the T. Rex, the woolly mammoth, and the Dodo bird along with extinct ferns, grasses and cacti. On the other hand, the best days of the human race could be just beginning. If we are smart about how we go about discovering and using these riches in the skies and applying the best of our new technologies, it could be the start of a new beginning for humanity. Konstantin Tsiokovsky, the Russian astronautics pioneer, who fi rst conceived of practical designs for spaceships, famously said: “A planet is the cradle of mankind, but one cannot live in a cradle forever.” Well before Tsiokovsky another genius, Leonardo da Vinci, said, quite poetically: “Once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been, and there you will always long to return.” The founder of the X-Prize and of Planetary Resources, Inc., Dr. Peter Diamandis, has much more brashly said much the same thing in quite diff erent words when he said: “The meek shall inherit the Earth. The rest of us will go to Mars.” The New Space Billionaires Peter Diamandis is not alone in his thinking. From the list of “visionaries” quoted earlier, Elon Musk, the founder of SpaceX; Sir Richard Branson, the founder of Virgin Galactic; and Paul Allen, the co-founder of Microsoft and the man who financed SpaceShipOne, the world’s first successful spaceplane have all said the future will include a vibrant new space economy. Th ey, and others, have said that we can, we should and we soon shall go into space and realize the bounty that it can offer to us. Th e New Space enterprise is today indeed being led by those so-called space billionaires , who have an exciting vision of the future. They and others in the commercial space economy believe that the exploitation of outer space may open up a new golden age of astral abundance. They see outer space as a new frontier that can be a great source of new materials, energy and various forms of new wealth that might even save us from excesses of the past. Th is gold rush in the skies represents a new beginning. We are not talking about expensive new space ventures funded by NASA or other space agencies in Europe, Japan, China or India. No, these eff orts which we and others call New Space are today being forged by imaginative and resourceful commercial entrepreneurs. Th ese twenty-fi rst century visionaries have the fortitude and zeal to look to the abundance above. New breakthroughs in technology and New Space enterprises may be able to create an “astral life raft” for humanity. Just as Columbus and the Vikings had the imaginative drive that led them to discover the riches of a new world, we now have a cadre of space billionaires that are now leading us into this New Space era of tomorrow. These bold leaders, such as Paul Allen and Sir Richard Branson, plus other space entrepreneurs including Jeff Bezos of Amazon and Blue Origin, and Robert Bigelow, Chairman of Budget Suites and Bigelow Aerospace, not only dream of their future in the space industry but also have billions of dollars in assets. These are the bright stars of an entirely new industry that are leading us into the age of New Space commerce. These space billionaires, each in their own way, are proponents of a new age of astral abundance. Each of them is launching new commercial space industries. They are literally transforming our vision of tomorrow. These new types of entrepreneurial aerospace companies—the New Space enterprises—give new hope and new promise of transforming our world as we know it today. The New Space Frontier What happens in space in the next few decades, plus corresponding new information technologies and advanced robotics, will change our world forever. These changes will redefi ne wealth, change our views of work and employment and upend almost everything we think we know about economics, wealth, jobs, and politics. Th ese changes are about truly disruptive technologies of the most fundamental kinds. If you thought the Internet, smart phones, and spandex were disruptive technologies, just hang on. You have not seen anything yet. In short, if you want to understand a transition more fundamental than the changes brought to the twentieth century world by computers, communications and the Internet, then read this book. There are truly riches in the skies. Near-Earth asteroids largely composed of platinum and rare earth metals have an incredible value. Helium-3 isotopes accessible in outer space could provide clean and abundant energy. There is far more water in outer space than is in our oceans. In the pages that follow we will explain the potential for a cosmic shift in our global economy, our ecology, and our commercial and legal systems. These can take place by the end of this century. And if these changes do not take place we will be in trouble. Our conventional petro-chemical energy systems will fail us economically and eventually blanket us with a hydrocarbon haze of smog that will threaten our health and our very survival. Our rare precious metals that we need for modern electronic appliances will skyrocket in price, and the struggle between “haves” and “have nots” will grow increasingly ugly. A lack of affordable and readily available water, natural resources, food, health care and medical supplies, plus systematic threats to urban security and systemic warfare are the alternatives to astral abundance. The choices between astral abundance and a downward spiral in global standards of living are stark. Within the next few decades these problems will be increasingly real. By then the world may almost be begging for new, out of- the-box thinking. International peace and security will be an indispensable prerequisite for exploitation of astral abundance, as will good government for all. No one nation can be rich and secure when everyone else is poor and insecure. In short, global space security and strategic space defense, mediated by global space agreements, are part of this new pathway to the future.

### Case

Aff doesn’t solve – its literally whole res and theres no alternative – aff doesn’t do anything except say space bad –

We don’t link – we say extracting resources like water and metal good but our disads aren’t abt colonization

Things like resource depletion are a much more pressing issue as we need them rn – water is running out and we come first in tf bc moral uncertainty – and what theyre saying hasn’t happened yet and will take decades+

#### A/T Lockett 21 evidence

**The private sector doesn't have the incentive to innovate without generous public support---the government won’t fund private entities if they are trying to take over space**

**Aronoff 18 Aronoff, Kate. [staff writer at The New Republic, and a former fellow at the Type Media Center. Her work has appeared in The Intercept, The New York Times, The Nation, Dissent, Rolling Stone, and The Guardian, among other outlets] “The Case For Nationalizing Elon Musk.” In These Times. February 08, 2018. Web. December 11, 2021. https://inthesetimes.com/article/elon-musk-spacex-tesla-falcon-heavy-launch**

**On Tuesday, Elon Musk launched some stuff into space. The SpaceX Falcon Heavy rocket was shot into the Solar System, tailed by a Tesla Roadster blasting David Bowie songs, reportedly the fastest car ever to be released into orbit. Each Falcon launch is only expected to cost around $90 million?—?a bargain in the world of extraterrestrial exploration. *Scientific American[s] gawked, “Elon Musk Does It Again,” praising the “bold technological innovations and newfound operational efficiencies that allow SpaceX to not only build its rockets for less money, but also reuse them.” That view?—?shared by several other outlets?—?fits comfortably with the Tony Stark-like image Musk has crafted for himself over the years*: a quirky and slightly off-kilter playboy genius inventor capable of conquering everything from outer space to the climate crisis with the sheer force of his imagination. *One of Musk’s long-term goals is to create a selfsustaining colony on Mars, and make humanity an interplanetary species. He hopes to shoot two very wealthy people around the moon at some point this year. Musk has invested an awful lot of public money into making those dreams a reality. But why should Americans keep footing the bill for projects where only Musk and his wealthy friends can reap the rewards?* Enter: the case for nationalizing Elon Musk, and making the U.S. government a major stakeholder in his companies. The common logic now holds that the private sector?—?and prodigies like Musk, in particular?—?are better at coming up with world-changing ideas than the public sector, which is allegedly bloated and allergic to new, outside-the-box thinking. Corporations’ hunt for profits and lack of bureaucratic constraints, it’s said, compel cutting-edge research and development in a way that the government is simply incapable of. With any hope, more of these billionaires’ breakthroughs than not will be in the public interest. The reality, as economist Mariana Mazzucato argues in her 2013 book The Entrepreneurial State: Debunking Public vs. Private Sector Myths, is very different. *Many of the companies that are today considered to be headed by brilliant savants?—?people like Steve Jobs and, yes, Elon Musk?—?owe much of their success to decades of public sector innovation, through repackaging technologies developed over the course of several decades into new products. Take the iPhone, essentially a collection of Defense Department research and National Science Foundation-grant projects packed into one shiny machine.* “The prospect of the State owning a stake in a private corporation may be anathema to many parts of the capitalist world,” Mazzucato writes, “but given that governments are already investing in the private sector, they may as well earn a return on those investments.” As she notes, *Musk’s* future-oriented empire?—?*Tesla Motors, SolarCity and SpaceX?—?has benefitted from around $5 billion in local, state and federal government support, not to mention many years of foundational public research into programs like rocket technology. SpaceX itself exists largely for the sake of competing for government contracts, like its $5.5 billion partnership with NASA and the U.S. Air Force. The U.S. Department of Energy invested directly in that company, as well as in Tesla’s work on battery technology and solar panels. The latter is perhaps the biggest success story of the Department of Energy stimulus grant that also supported Solyndra, a solar energy company reliably held up by the Right as an example of the government’s failure to make wise investment decisions. “Taxpayers footed the bill for Solyndra’s losses?—?yet got hardly any of Tesla’s profits,”* Mazzucato notes. As Mazzucato finds, the private sector hasn’t done much to earn its reputation as a risk-taker. Corporations and venture capitalists often adopt conservative thinking and fall into “path dependency,” and are generally reluctant to invest in important early-stage research that won’t necessarily turn a profit in the short-run. This kind of research is inherently risky, and the vast majority of this kind of protean R&D (research and development) fails. For every internet?— ?birthed in the Defense Department?—?there are a well over a dozen Solyndras, but it’s virtually impossible to have one without the other. The problem runs deeper still. Whereas in the past public sector research has been able to attract top-tier talent, the myth that the private sector can do what the State can’t has created a negative feedback loop whereby bright young scientists and engineers flock toward a private sector that goes on to further its reputation for being the place where the real innovation is happening. The alternative Mazzucato suggests is to socialize risk and reward alike, *rather than simply allowing companies that enjoy the benefits of public innovation to funnel their profits into things like stock buybacks and tax havens?—?or, for that matter, flamethrowers. When companies like SpaceX make it big, they’d be obligated to return some portion of their gains to the public infrastructure that helped them succeed, expanding the government’s capacity to facilitate more innovative development. All this is not to say that there isn’t a critical role to play for people like Jobs and Musk in bringing new technology to the market.* In all likelihood, Tesla’s Powerwall and SolarCity panels will play a key role in our transition off of fossil fuels. But lionizing Musk as the sole creator of the Powerwall and this week’s space launch stands to perpetuate a dangerous series of myths about who’s responsible for such cutting-edge development. Through smart supply-and-demand-side policy, states can play a crucial role in shaping and creating markets for the technologies we’ll need to navigate the 21st century. This can happen not just through R&D but also through developments like fuel efficiency standards, which encourage carmakers to prioritize vehicles that run off of renewable energy. Given the mounting reality of climate change and the necessity to rapidly switch over to a clean energy economy, there’s also a bigger question about how actively the state should be encouraging certain kinds of research and manufacturing. *During World War II, the United States essentially had a planned economy: By 1945, around a quarter of manufacturing in the country was under state control. The reason for that was simple?—?the U.S. government saw an existential threat, and directed some of its biggest corporations to pitch in to stop it or else risk getting taken over by the state.* There’s some Cold War nostalgia to hoisting shiny objects into orbit?—?a telegenic show of America’s technological supremacy. But it may not be much solace to coastal residents forced to flee in the coming decades, whose homes are rendered unlivable by a mixture of extreme weather and crumbling, antiquated infrastructure. And if you’ve watched any number of big-budget sci-fi productions over the last several years, it’s not hard to imagine Musk’s Martian colony spinning off into some Elysium-style eco-apartheid, where the rich?—?for the right price?—?can escape to new worlds while the rest of us make do on a planet of dystopian slums, swamps and deserts. *Today, the risk posed by climate change is greater still than that posed by fascism on the eve of World War II, threatening to bring about a planet that’s uninhabitable for humans, and plenty hostile to them in the meantime. In such a context, do we need to launch cars into space? Maybe not. If the public sector is going to continue footing the bill for Elon Musk’s fantasies, though, he should at least have to give back some credit, and a cut of the profits.***

### Cap Good

**Capitalism is** inevitable**. Economic theory means it’s bound to stay – empirics prove**

Scheper 5 Patrick Q. Scheper “Capitalism: An Inevitable Conclusion” Rebirth of Reason February 8th 2005 <http://rebirthofreason.com/Articles/Scheper/Capitalism_An_Inevitable_Conclusion.shtml> JW 3/15

The next question that needs to be asked is "What is capitalism? Is it an art or a science?" The question is better asked, "Is economics an art or a science", as capitalism is an economic theory. However, as we will see, it is really the only correct economic theory that can prevail. Economics is the study of how people relate to each other when it comes to trade and production. As this is the case, economics is really part of political science, or the study of how people relate to each other in an organized society. Political science is a science (as the name implies) and is part of the broader science, philosophy. Philosophy is a science in that it is grounded in certain absolutes (which, ironically, some of the most well-regarded philosophers have ignored.) This essay is not intended to defend these absolutes, as there are plenty of other works which adequately do so. This essay accepts the fact that there are absolutes. Existence, the primacy of existence, the primacy of the individual over society, and identity are the most notable. From these absolutes, natural laws can be found and universally validated. The most important of these, for the purposes of this essay, are the "natural rights": life, liberty, and the pursuit of happiness. From these come other laws and rights, like the right to free speech and property rights. If philosophy is a science based in absolutes, than its resulting branches must also be sciences and grounded by the absolutes and laws derived from them. Therefore, economics is a science and all economic systems must be consistent with natural laws. The only truly consistent economic system is a capitalist one as it is in its most basic of definitions a system whereby everyone is allowed to act according to natural law and pursue his own interests so long as his actions do not prohibit another’s ability to do so. Economics is a science, and capitalism is a valid and universally true scientific process. In fact it is the only true scientific process that can be used in the field of economics.Correct Science Always Prevails Because capitalism is scientifically correct, it will always prevail. Any attempts to build an economic system or process that ignores the basic laws derived from the absolutes of philosophy and ignores natural rights and laws, will inevitably come to destroy itself, just as the [person] man who jumped off the cliff and ignored gravity met [their] his demise. Economics is a process, in that it studies the means by which people interact and exchange and create resources. Capitalism is a specific process that defines how an economy should work via individual freedoms. Capitalism, as it adheres to the basic absolutes of philosophy, is scientifically correct. Other economic systems have been proposed and put into place throughout history, either voluntarily or through coercion. These systems have failed, are failing, or will fail if they are inconsistent with reality and its absolutes. Socialism and communism ignore the primacy of the individual and as a result disregard property rights and a person’s right to his life and its products. As we have seen in the Soviet Union and other communist countries, these economic systems will destroy themselves. A society where the factors and outputs of productive efforts are completely or partially controlled by the states cannot exist in perpetuity, as natural laws will eventually come to topple the system. The basic human nature to protect one’s property from being forcibly taken against one’s will and an individual’s primacy over society will always (though sometimes very gradually) overcome even the most ruthless coercive efforts. Just as natural rights prevailed over communism and are beginning to open up former communist economies to free market processes, so too will natural law prevail[s] over "active governments" and economic regulations set up in quasi-free market countries like the United States. Government regulations, agencies, and laws that inhibit the free market will never work in the long run. Examples can be seen in the fact that private industries always correct government errors (i.e. FedEx, private schooling) and even those seemingly uncorrectable errors will simply be outdone by more efficient market forces. 401(k) plans are eliminating dependency on social security for many and private charities always seem to pop up to correct poor planning and misuse of funds by the welfare state. FedEx was set up and marketed on its ability to outdo the inefficient United States Postal Service. The internet, information technology, and Silicon Valley have rendered many government regulations useless if not downright impossible to enforce. When a proponent of the free market gets discouraged by government regulations and coercive authority, he need only to look around to see that capitalism always prevails, even in the face of extreme regulations and anti-competitive laws. Communism, socialism, regulations, and all other free market hindrances are akin to the man who jumps off the cliff. Capitalism is the gravity that will cause his fall.

#### Free markets solve poverty and oppression – global trends go neg

MacKenzie ‘14: (The Data Is Clear: Free Markets Reduce Poverty. June 16, 2014. D.W. MacKenzie, Assistant Professor of Economics At Carroll College)

I have no doubt that Pope Francis has seen many poor people with his own eyes. But, our comprehension of the root causes of poverty requires both data on economic conditions and theoretical knowledge of economic systems. What does rational analysis of evidence tell us about global poverty? It is an obvious fact that severe poverty has disappeared in the most industrialized countries. Nations like the US, UK, Switzerland, and Japan industrialized within what were predominantly laissez-faire free-market conditions. Even the so-called social democracies, like Sweden and Germany, developed in free-market conditions, and adopted extensive state welfare and regulatory programs only after achieving high levels of economic development and industrialization. World Bank data shows that there is inequality, but this inequality is between the free-market nations and the crony-capitalist and socialistic nations.[1] The idea that domestic laissez-faire causes poverty is unfounded. It is a historical fact that India, China, and Kenya never tried capitalism, so this system was never given a chance to work. Furthermore, China and India have realized some progress in abating poverty since they moved in the direction of capitalism. Of course, China and India adopted regulated crony capitalism, but this is still better than their old socialist systems. One could argue that global capitalism allows a few people in some nations to exploit the masses of other nations. Marxists have attempted to make this case since Lenin. Lenin revised Marx because even in his day it had become obvious that Marx’s prediction that capitalists would exploit domestic workers was refuted by evidence. We now know that Lenin’s attempt to blame poverty on global markets is wrong. As previously mentioned, economic conditions in China and India improved after switching from socialism to crony capitalism. China and India have also expanded trade in global markets. There have been significant improvements in living conditions around the world over the past thirty years. The largest improvements in the poorest nations took place during the wave of globalization that took place twenty years ago, after the fall of the USSR. The collapse of the Soviet Union opened the door to unprecedented globalization of industry. What does real data tell us about poverty during this period? Per Capita GDP rose dramatically: Thirty years ago half (50 percent) the people in the poorer nations of the world lived [in extreme poverty](http://data.worldbank.org/news/extreme-poverty-rates-continue-to-fall). In 2012, 21 percent of people in the poorer nations of the world live in extreme poverty. Development of global markets has greatly lessened poverty around the world. This is a very important fact. Movement from being in the lowest global income bracket, to lower middle income to middle income means moving from average life expectancy in the low forties to life expectancy of fifty or sixty, respectively. Cardinal Maradiaga is wrong: this economy does not kill; it has extended the lives of the poorest people in the world. A superficial examination of the world today reveals that there is poverty, that this poverty has real consequences for living-standards and life-expectancies, and that we do have global markets and capitalism in most of the world. Careful analysis shows that capitalism has truly lessened the severity of poverty over time, and that the main problem with capitalism in most nations is that it has too many elements of government regulation and cronyism. Pope Francis and Cardinal Maradiaga have good intentions, but their anti-capitalistic beliefs are unfounded. Their campaign against global capitalism endangers the poorest people of the world.

#### Capitalism solves domestic and global poverty – *you need wealth before you can redistribute it* – solves the aff.

Pethokoukis ’18 (James; a columnist and policy analyst, is the Dewitt Wallace Fellow at the American Enterprise Institute; October 18th; “Ending poverty by ‘ending capitalism’ is absolute nonsense. Just so, so wrong”; <http://www.aei.org/publication/ending-poverty-by-ending-capitalism-is-absolute-nonsense-just-so-so-wrong/>; accessed 1/12/19; MSCOTT)

It’s hardly to Teen Vogue’s credit that its dreadful story “[What ‘Capitalism’ Is and How It Affects People](https://www.teenvogue.com/story/what-capitalism-is?mbid=social_twitter)” isn’t nearly as wrongheaded and offensive as the viral [tweet](https://twitter.com/TeenVogue/status/1052641654367313921) promoting it: “Can’t[#endpoverty](https://twitter.com/hashtag/endpoverty?src=hash)without ending capitalism!” But let’s start with the grotesque, clickbaity tweet. End poverty where, exactly? Is Teen Vogue referring to the United States, which it identifies as an example of a “modern capitalist” country along with Britain and Germany?

First of all, the median income of the bottom 20 percent of households is up more than 70 percent since 1979 in real terms, according to the [CBO](https://www.cbo.gov/publication/53597). More to the point, poverty in America has declined considerably since LBJ declared a War on Poverty in 1964. Like other advanced capitalist economies, the United States redistributes some of its massive, market-generated wealth to improve living standards at the bottom. According to the Census Bureau’s [Supplemental Poverty Measure](https://www.census.gov/library/publications/2018/demo/p60-265.html) — which unlike the official poverty measure takes into account key safety net programs such as the Earned Income Tax Credit and the Supplemental Nutrition Assistance Program — the poverty rate fell to 13.9 percent in 2017 from 26 percent in 1967. There’s even better news when one looks at “consumption-based” poverty measures, which calculates what a family consumes instead of how much income it earns. The work of visiting AEI scholar Bruce Meyer (along with his colleague James Sullivan) finds consumption-based poverty [is more like 3 percent](http://www.aei.org/publication/annual-report-on-us-consumption-poverty-2016/). Here is a relevant bit from a recent [podcast chat](http://www.aei.org/publication/inequality-and-poverty-in-the-us-a-long-read-qa-with-bruce-meyer/) we had:

Pethokoukis: Correct me if I have the numbers wrong, but if you look at just the official poverty rate measure you hear about in the news, since 1980 it seems kind of flat. But if you look at consumption, poverty has gone down fairly considerably. Is that right?

Meyer: Yes, so one of the statistics that I like least and I think is most misleading is the poverty rate. The official poverty rate says that we are at the same level of poverty now as we were in the 70s, which just does not fit.

Pethokoukis: So the Great Society failed, we spent all this money and poverty is no better.

Meyer: That’s essentially what the official statistics say, but you shouldn’t believe them for two main reasons. First, the official statistics don’t count much of what we’ve done to reduce poverty; so the official statistics look at pre-tax money income which omits the earned income tax credit, which omits food stamps, it omits housing benefits, it omits Medicaid. So, it gives you a very distorted picture of how those at the bottom are doing.

The second big reason that the official poverty statistic completely misleads the people taking them at face value is that the thresholds above which you have to be to not be poor go up too fast over time because they are indexed to inflation in a way that overstates the effects of inflation.

And you can see that again if you look at material circumstances in more objective ways of those at the bottom. If you look at the housing conditions of the bottom 20% of the income distribution, they look like the housing conditions of the middle class 30 years ago. So, the rates of air conditioning, central air conditioning, of washers and dryers in the apartment, have gone way up. The incidents of peeling paint, of water leaks in the ceiling or in the pipes, and the like have gone way down.

Pethokoukis: When I think about the house I grew up in, it was about half the size of my current house, it had no air conditioning, and I remember the leaks in the ceilings. I certainly am sure that my parents considered us a solidly middle-class household. But I guarantee if I drove by that house with my kids, they would say, “We didn’t know you were so poor.”

Meyer: I think that’s exactly right. I think that’s what a lot of us can see in how our lives have changed, but the official statistics don’t really reflect that, in significant part because of the overstatement of inflation and because of the omission of in-kind transfers and other government benefits.

And if Teen Vogue doesn’t understand what’s happening in the US, maybe it’s really too much to ask that it understand global trends, like the historic massive reduction in global poverty over recent decades. ([Most Americans have no idea](http://www.aei.org/publication/extreme-poverty-declining-americans-have-no-idea/).) Over the past 30 years, the share of our fellow humans living in extreme poverty has decreased to 21 percent from 52 percent. That’s a billion fewer people in extreme poverty, largely in China and India. The Economist magazine — a publication quite willing to address flaws in the world’s capitalist economies — has put it this way:

The world’s achievement in the field of poverty reduction is, by almost any measure, impressive. . . . Most of the credit, however, must go to capitalism and free trade, for they enable economies to grow — and it was growth, principally, that has eased destitution. The world now knows how to reduce poverty. A lot of targeted policies — basic social safety nets and cash-transfer schemes help. So does binning policies like fuel subsidies to Indonesia’s middle class and China’s hukou household-registration system that boost inequality.

But the biggest poverty-reduction measure of all is liberalizing markets to let poor people get richer. That means freeing trade between countries (Africa is still cruelly punished by tariffs) and within them (China’s real great leap forward occurred because it allowed private business to grow). Both India and Africa are crowded with monopolies and restrictive practices. Many Westerners have reacted to recession by seeking to constrain markets and roll globalization back in their own countries, and they want to export these ideas to the developing world, too. It does not need such advice. It is doing quite nicely, largely thanks to the same economic principles that helped the developed world grow rich and could pull the poorest of the poor out of destitution.

You’ll find none of the above in the Teen Vogue piece, which means they’ve missed the story. Totally. Modern advanced economies — whether America, Sweden, the UK, or Germany — combine market-driven economies with social safety nets of one flavor or another. The result is high living standards and a low poverty level. But you can’t redistribute wealth without creating it. And that is what innovation-driven capitalism has done really well for the past two centuries. I would urge Teen Vogue editors and reporters to read “[Factfulness: Ten Reasons We’re Wrong About the World–and Why Things Are Better Than You Think](https://www.amazon.com/dp/B0756J1LLV/ref=dp-kindle-redirect?_encoding=UTF8&btkr=1)” by the late Hans Rosling, a fantastic book which examines all the ways in which very smart people are getting so many important things so very wrong — including poverty. Hard to believe this story has been up since April without any apparent modification.

### AT Treaty Violation:

#### 1] The Clark 21 card – in the cite and in the card it tells us how this is an allegation – ie Chinas claims with no evidence – that’s the entire link about violating treaties and we can’t even fact check it – not credible

#### 2] Even if these allegations were true, 2 CLOSE violations aren’t real violations – unhighlighted text tells us the violations were only close

#### 3] 2 small violations won’t trigger the impact – too marginal

#### 4] The Wilson 21 evidence’s tag isn’t even related to the card – no where does it say nuclear threats if violation occurs – it talks about the treaty addressing concerns with war but nothing abt the tag.

### AT Company Towns:

#### 1] Cross apply the Aronoff 18 evidence which tells us how

#### when companies like SpaceX make it big, they’d be obligated to return some portion of their gains to the public infrastructure that helped them succeed- ie disproves company towns

#### 2] The Mellon 19 evidence is literally cites a song from 1947 – no relevance + the article is from a random magazine and the people writing it know nothing abt space

#### 3] the only evidence linking anything to space is Mellon 19 – it says that there is a “possibility” company towns will develop – little to no chance

#### 4] people have the option to easily not work in space – solves for the contention

#### 5] extend all the carded evidence we read abt how cap actually solves for poverty and oppression which solves for this bc u need wealth before redistribution

#### 6] they say In cross that if theres money ppl can leave company towns – our ev tells you how cap solves poverty meaning ppl will have money and can leave – we solve