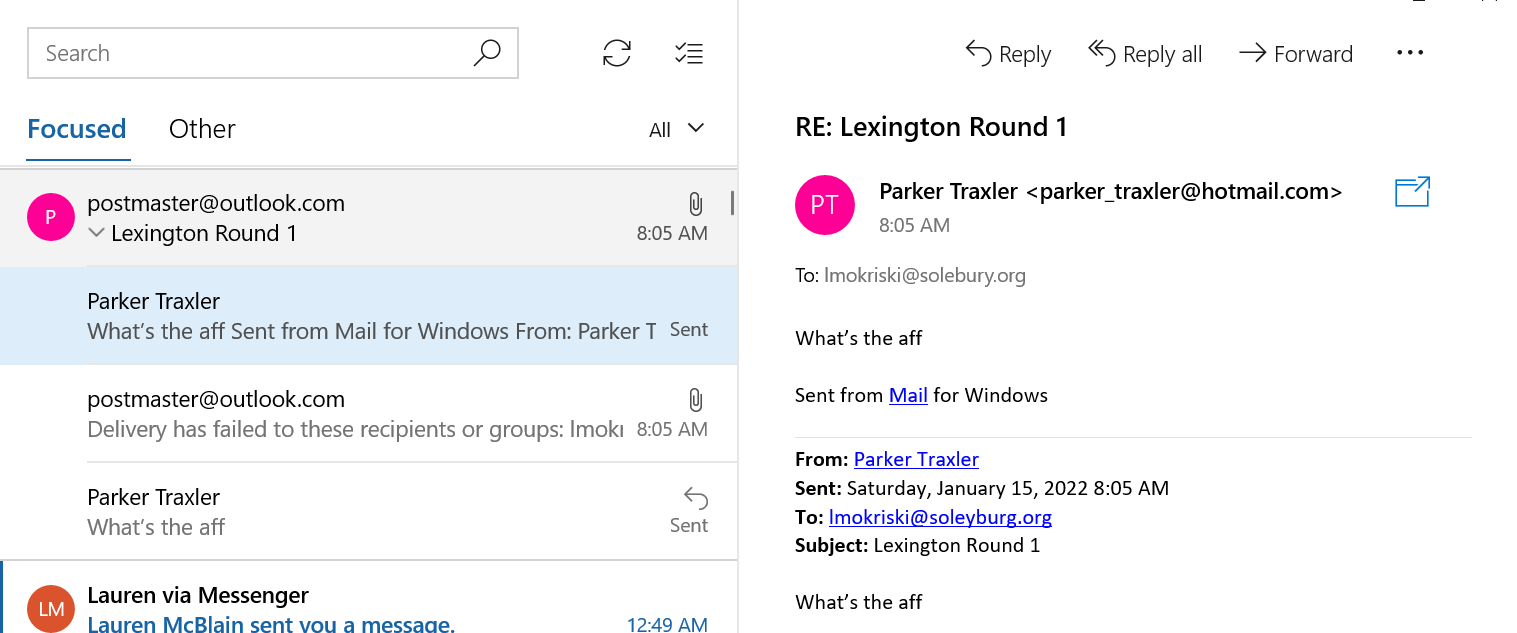
### New Affs

#### Interp – the affirmative debater must disclose the affirmative 30 minutes prior to the round. To clarify, disclosure can occur on the wiki or over message.

#### Violation – I’ve inserted a screenshot in the doc.



#### Prefer –

#### 1] Neg Prep – 4 minutes of prep is not enough to put together a coherent 1NC or update generics – 30 minutes is necessary to learn a little about the affirmative and piece together what 1NC positions apply and cut and research their applications to the aff

#### 2] Academic Integrity – disclosing new affs is key to ensure that evidence isn’t miscut – 4 minutes of prep isn’t enough, especially since I need to save some for the 2NR and also construct a 1NC. This outweighs because if they can lie about their aff, everything else they could have said is a lie and should be disregarded. Key to education otherwise we wouldn’t learn what is true and what’s not.

#### Fairness because debate’s a game and education because it’s the only portable skill from debate.

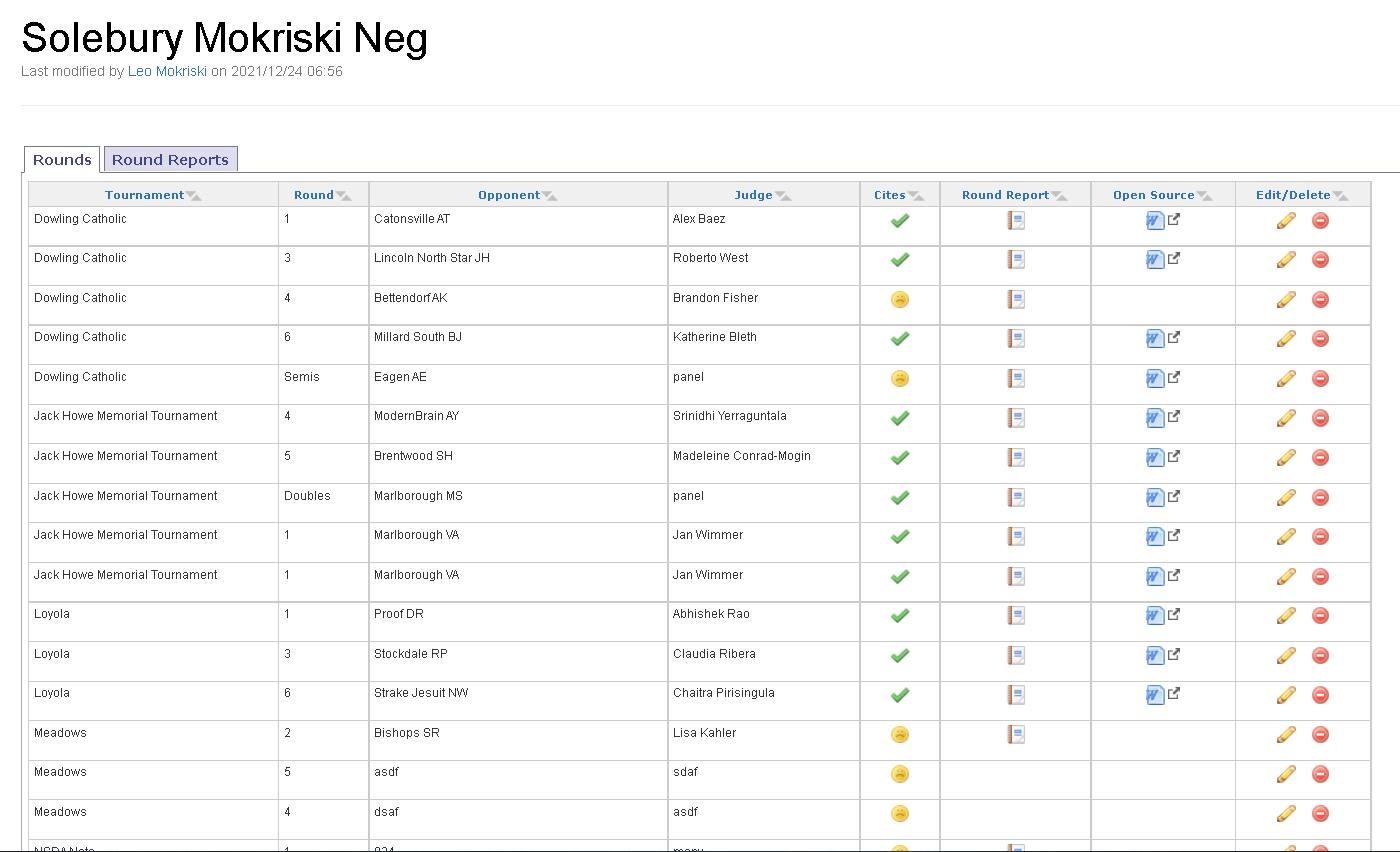
#### Drop the debater – A] Their lack of disclosure makes substance irreparable because our entire argument is that we did not have a basis to engage the aff to begin with, B] Drop the arg means they lose since they lose their entire advocacy and cannot have offense. Competing interps – a) It fosters the best norms through encouraging the fairest rule b) Reasonability collapses by debating the brightline

#### No RVIs – a) Illogical – you shouldn’t win for proving that you’re fair or education because it’s a prima facie burden – logic outweighs because it determines what args count as valid b) It incentivizes you to bait theory and win off a scripted CI c) people will be scared to read theory against good theory debaters and will never be able to check abuse

### Round Reports

#### Interp – at all TOC bid distributing tournaments, debaters must disclose round reports on the 2021-2022 NDCA LD wiki for every round they have debated this season 30 minutes after the round. Round reports disclose which positions (AC, NC, K, T, Theory, etc.) were read/gone for in every speech.

#### Violation – screenshot in the doc. They haven’t disclosed multiple round reports and many of them only disclose the first two speeches.



#### 

#### Standards –

#### 1] Pre-Round Prep – enables me to see what arguments people have been reading against you which means that I know what arguments would be interacting well with the aff and can cut these case positions for more in-depth debates. Also enables small schools to see what strategies engage with affs that use extremely dense literature, especially when they don’t have access to large files of generics.

#### 2] Disclosure Verification – absent the interp, it’s extremely difficult to determine what positions have been broke and whether you are disclosing responsibly since there needs to be a metric other than yourself that keeps track of broken positions – it’s a question of normsetting. Drop the debater – a) Deters future abuse, b) Rectifies time loss, c) DTA encourages baiting – Debaters could fill their cases w/ abusive args, baiting theory and then just drop the argument in the next speech and go for undercovered substance

#### Competing interps – a) It fosters the best norms through encouraging the fairest rule b) Reasonability collapses by debating the brightline

#### No RVIs – a) Illogical – you shouldn’t win for proving that you’re fair or education because it’s a prima facie burden – logic outweighs because it determines what args count as valid b) It incentivizes you to bait theory and win off a scripted CI c) people will be scared to read theory against good theory debaters and will never be able to check abuse

### NC

#### The meta ethic is practical reason.

#### 1] Is-ought gap – empiricism can only observe what is since that’s the only thing in our perception, not what ought to be, but it’s impossible to derive an ought from descriptive premises which requires a priori premises to form morality.

#### 2] Empirical uncertainty– evil demon could deceive us, dreaming, simulation, and inability to know other’s experiences makes empiricism an unreliable basis for universal ethics.

#### 3] Infallibility – practical reason is the only unescapable authority because to ask why we should be reasoners is to concede authority to reason since the question itself uses reason – anything else is nonbinding and arbitrary.

#### Reason requires that maxims we act upon must be universalizable – any reasoner would know that two plus two equals four because there is no a priori distinction between agents so norms must be universally valid.

#### And willing an action that violates the freedom of others is a contradiction – if I decide to kill someone, that action is not universalizable because that would justify other people killing me too.

#### Thus, the standard is respecting freedom. Prefer additionally –

#### 1] Performativity—freedom is the key to the process of justification of arguments. Willing that we should abide by their ethical theory presupposes that we own ourselves in the first place.

#### 2] All other frameworks collapse—non-Kantian theories source obligations in extrinsically good objects, but that presupposes the goodness of the rational will.

#### 3] TJFs and they outweigh since it precludes engagement on the framework layer – prefer for Resource disparities- Our framework ensures big squads don’t have a comparative advantage since debates become about quality of arguments rather than quantity - their model crowds out small schools because they have to prep for every unique advantage under each aff, every counterplan, and every disad with carded responses to each of them

#### Acquisition of property can never be unjust – to create rights violations, there must already be an owner of the property being violated, but that presupposes its appropriation by another entity.

Feser 1, (Edward Feser, 1-1-2005, accessed on 12-15-2021, Cambridge University Press, "THERE IS NO SUCH THING AS AN UNJUST INITIAL ACQUISITION | Social Philosophy and Policy | Cambridge Core", Edward C. Feser is an American philosopher. He is an Associate Professor of Philosophy at Pasadena City College in Pasadena, California. [https://www.cambridge.org/core/journals/social-philosophy-and-policy/article/abs/there-is-no-such-thing-as-an-unjust-initial-acquisition/5C744D6D5C525E711EC75F75BF7109D1)[brackets](https://www.cambridge.org/core/journals/social-philosophy-and-policy/article/abs/there-is-no-such-thing-as-an-unjust-initial-acquisition/5C744D6D5C525E711EC75F75BF7109D1)%5bbrackets) for gen lang]//phs st

There is a serious difficulty with this criticism of Nozick, however. It is just this: There is no such thing as an unjust initial acquisition of resources; therefore, there is no case to be made for redistributive taxation on the basis of alleged injustices in initial acquisition. This is, to be sure, a bold claim. Moreover, in making it, I contradict not only Nozick’s critics, but Nozick himself, who clearly thinks it is at least possible for there to be injustices in acquisition, whether or not there have in fact been any (or, more realistically, whether or not there have been enough such injustices to justify continual redistributive taxation for the purposes of rectifying them). But here is a case where Nozick has, I think, been too generous to the other side. Rather than attempt —unsatisfactorily, in the view of his critics—to meet the challenge to show that initial acquisition has not in general been unjust, he ought instead to have insisted that there is no such challenge to be met in the first place. Giving what I shall call “the basic argument” for this audacious claim will be the task of Section II of this essay. The argument is, I think, compelling, but by itself it leaves unexplained some widespread intu- itions to the effect that certain specific instances of initial acquisition are unjust and call forth as their remedy the application of a Lockean proviso, or are otherwise problematic. (A “Lockean proviso,” of course, is one that forbids initial acquisitions of resources when these acquisitions do not leave “enough and as good” in common for others.) Thus, Section III focuses on various considerations that tend to show how those intuitions are best explained in a way consistent with the argument of Section II. Section IV completes the task of accounting for the intuitions in question by considering how the thesis of self-ownership itself bears on the acqui- sition and use of property. Section V shows how the results of the previ- ous sections add up to a more satisfying defense of Nozickian property rights than the one given by Nozick himself, and considers some of the implications of this revised conception of initial acquisition for our under- standing of Nozick’s principles of transfer and rectification. II. The Basic Argument The reason there is no such thing as an unjust initial acquisition of resources is that there is no such thing as either a just or an unjust initial acquisition of resources. The concept of justice, that is to say, simply does not apply to initial acquisition. It applies only after initial acquisition has already taken place. In particular, it applies only to transfers of property (and derivatively, to the rectification of injustices in transfer). This, it seems to me, is a clear implication of the assumption (rightly) made by Nozick that external resources are initially unowned. Consider the following example. Suppose an individual A seeks to acquire some previously unowned resource R. For it to be the case that A commits an injustice in acquiring R, it would also have to be the case that there is some individual B (or perhaps a group of individuals) against whom A commits the injustice. But for B to have been wronged by A’s acquisi- tion of R, B would have to have had a rightful claim over R, a right to R. By hypothesis, however, B did not have a right to R, because no one had a right to it—it was unowned, after all. So B was not wronged and could not have been. In fact, the very first person who could conceivably be wronged by anyone’s use of R would be, not B, but A himself, since A is the first one to own R. Such a wrong would in the nature of the case be an injustice in transfer—in unjustly taking from A what is rightfully his—not in initial acquisition. The same thing, by extension, will be true of all unowned resources: it is only after some- one has initially acquired them that anyone could unjustly come to possess them, via unjust transfer. It is impossible, then, for there to be any injustices in initial acquisition.7

### Case

#### 1] Calculative regress—util would require we calculate how much time to spend on our calculations and so on—means we’re never ever to take productive actions.

#### 2] Act util collapses to rule util—people who always try to act in the right way make mistakes and would never be able to make decisions—only rule util solves, where we have the rule that is most likely to, in most instances, do more good. That rule is the NC—protection of freedom is a good base line because without direct violation of each other’s sovereignty, we’re way less likely to do harm to them.

#### 3] Valuing a state of affairs concerning a person assumes we value that person in the first place—you wouldn’t care about a person being sad if you didn’t value that person—means util presupposes deontological obligations to respect humanity

#### 4] Util’s repugnant—it can’t ever recognize things as intrinsically bad—even things like slavery and rape could be obligatory to have some chance of a greater future good

#### 5] Can’t aggregate—people have different conceptions of pleasure and pain—there are people like masochists who enjoy physical pain

#### 6] Rationality isn’t aggregative—whenever we make a decision, we try to step back and make the right one—this is an attempt to satisfy our rational nature, to make the right decision—it wouldn’t make sense, then, to try to maximize rationality. Instead of rationality being something like food that we want, it’s something like hunger that we want to *satisfy*—you wouldn’t try to maximize hunger just so you could eat more.

#### Space wars are impossible and can’t escalate --- debris, high monetary costs, and lack of lift capabilities

Handberg, 17 – Faculty and Research, School of Politics, Security, and International Affairs, UCF Roger Handberg, “Is space war imminent? Exploring the possibility,” Comparative Strategy. 2017. <https://www.tandfonline.com/doi/pdf/10.1080/01495933.2017.1379832?needAccess=true>

--Space wars were discounted in 1960s – things haven’t changed now – environment still hostile – moreso now bc debris is worse

--Costs a ton to send stuff up there

--Lift capabilities are weak which means war can’t be sustained

--Replacements are slow so war has to be ended

Why now?

Recently, there has been an ongoing resurgence of interest in the possibilities for actual combat in outer space, effectively war in a new domain. Why this would become plausible now is interesting, since the physical realities present in the early days of space activity have not changed. Spacecraft remain vulnerable to attack from the ground by anti-satellite (ASAT) weapons, while the debris issue grows exponentially worse now, given the proliferation of such objects in space as part of the normal operations in outer space: used boosters, dead satellites, pieces of broken spacecraft and satellites, and small particles with deadly impact on other spacecraft. The space shuttles routinely returned to Earth with dings and scars from space debris, while the International Space Station (ISS) several times has been lifted out of harm’s way due to oncoming debris. More critically for assessing space-war possibilities, the sheer cost of conducting such operations remains extremely high, while the possibilities for sustaining combat in space are suspect due to lack of lift capability. The difficulty in orbiting replacement satellites to restore functionality remains, assuming the environment is not too hostile due to expanding debris fields. Replacement satellites or other space hardware are still slow-production items, although that in principle could be placed on more of an assembly-line basis, as was done with the Iridium satellite flotilla of 66 comsats plus multiple spares.19 Or, smaller cube satellites with more limited functionality could be orbited as gap fillers while larger, more functional satellites are built and flown if time exists to do so.

#### Asteroid mining is key to sustaining our world after we run out of resources.

Elvis 21 [Martin (senior astrophysicist at the Center for Astrophysics, Harvard and Smithsonian), “Riches in Space”, Vox. 2 July 2021. https://aeon.co/essays/asteroid-mining-could-pay-for-space-exploration-and-adventure] //DebateDrills LC

What can we actually do with asteroids? That brings us to my favourite thing about them: their resources. Being an idealistic astrophysicist, my interest is in the money to be made from them. That really is idealistic because, if we can make a profit mining the asteroids, then doing bigger things in space will become a lot cheaper. Capitalism has its faults, but one thing it does well is to make things cheaper. I want to use it as a tool so that we can build far bigger telescopes than we could practically realise today. What do astronomers want? More light! Bigger telescopes! Asteroid mining could make that dream a reality.

The siren call of asteroids for miners is that the Main Belt asteroids contain vast amounts of resources. The iron found in asteroids adds up to some 10 million times the iron that we have in proven reserves on Earth. That’s a lot. It’s enough to build many rings of iron girders all the way around Earth’s orbit, along the lines of the science fiction novel Ringworld (1970) by Larry Niven. Not that a ringworld is a sensible thing to make, but it is a really big ring. More plausibly, with that much iron we could build cities in space, as envisaged by the physicist Gerard K O’Neill in the 1970s. Each of these cities would be big enough for a million people to live in. They would be rotating cylinders, and as a citizen of one you would be walking around inside the cylinder’s surface, feeling a fake gravity from the centrifugal force. That’s the scale of resources we’re talking about.

These vast material supplies could make for an era that people call ‘post-scarcity’, where there’s plenty for everyone, just as there is in the 23rd century of the Star Trek science fiction franchise. The starship crew on Star Trek don’t work to keep themselves fed and housed, that’s taken for granted. They work for adventure and exploration. Asteroid wealth could help all of us take a step towards that happy state.

The problem is how to get started. Iron in space is not going to make for giant profits in the short run. On the ground, it sells for less than $200 a ton. It would be worth more in space, but unfortunately there’s no one to buy huge tonnages of iron in space. To adapt the tagline from the Alien movies – ‘In space, no one can hear you sell.’ It certainly isn’t worth bringing space iron back to Earth since the cost of doing so would far exceed the price it could command. Starting to mine space for resources will have to begin with something so valuable that the cost of obtaining it in space is small by comparison. For now, the best bets are precious metals and – surprise – water.

Precious metals are obvious. Platinum sells for about $33.5 million a ton, and we know from meteorites that some asteroids are richer in platinum than any mine on Earth. That sounds promising. Platinum sales run at about 200 tons, or billions of dollars, per year. The bad news is that ‘richer than any mine on Earth’ is still concentrations of just tens of grams per ton, and extracting those precious grams isn’t easy. We can’t just bring an asteroid near to Earth to start extracting the platinum where we can have heavy machinery to work on it. That would take way too much fuel because, to carry more mass, rockets have to carry exponentially more fuel; unlike airplanes, they don’t get the oxygen for free from their surroundings, they have to pull it along with them. Any refining of platinum will have to be done robotically out in the native orbit of the asteroid. That’s quite a challenge.

Water is a less obvious money-maker. The surprise is that water is also worth millions per ton – if it’s sold in space. Water in space is really useful. It’s good for drinking, and the oxygen in it is good for breathing. You can split the hydrogen from the oxygen in H2O and you’ve got rocket fuel, and water is good at absorbing radiation to protect people from cancer-causing cosmic rays. So, in principle, water in orbit is pretty valuable. The good news is that up to 10 per cent of a water-rich asteroid can be water. It won’t be simple ice, most likely, but will be bound into clays and other rocks. Even better, water is much easier to extract than precious metals. Simply heating up the rock will release water that can then be captured.

### Theory

#### No 1AR theory – a) 1ar theory means it’s game over for the 2nr because of the 2ar collapse – the negative will inevitably undercover something, b) I can respond to 1ar only once which both kills resolvability and kills reciprocity since they can respond to 1nc shells twice.

#### Reasonability on 1ar theory – 7 minutes of the 1nc means they will always find there’s something abusive we did – reasonability’s key to incentivizing in-depth discussion rather than a 2ar collapse on theory.

#### Drop the arg on 1ar theory – 1ar theory is incentivized to restart the debate and avoid the 1n. Drop the arg solves because if one position the 1nc was abusive, then ignoring it in the 2ar allows evaluation of substance.

#### RVIs on 1ar theory – anything thing else puts me in a double bind because I’ll either overcover substance and undercover theory or vice versa which makes negating impossible – RVIs solve by creating another route to the ballot to compensate.

#### Reject aff reasonability claims –

#### 3] Norm setting – if you can’t defend why your model of debate is BETTER than your opponents’ model, then you should be held accountable for still using it – o/w on longevity since people follow rules in the future, not just this round

#### 4] Jurisdiction – even a marginal skew impairs your ability to determine the better debater and only competing interps allows us to determine that via offense defense

#### 5] Infinite abuse – unfair practices should be minimized but reasonability allows people to get away with defense, creating a race to the bottom where debaters try to get away with as much “reasonable” abuse as they can.

#### 6] Their indicts are potential abuse claims – if I win abuse on the interp then it isn’t frivolous and proves you’re unreasonable

### DA

#### Private sector innovation in the commercial space industry is high now.

**Smith 18** [Matthew Smith, 6-11-2018, "Commercialized Space and You," Science in the News, https://sitn.hms.harvard.edu/flash/2018/commercialized-space-and-you/]//DDPT

Step aside, NASA. The 20th century model of space exploration is running out of fuel, and private companies are now leading the race for human expansion across the galaxy. Elon Musk, Richard Branson, and Jeff Bezos are three of the billionaires leading this extraterrestrial adventure with their respective companies, SpaceX, Virgin Galactic, and Blue Origin. Bezos, the founder of Amazon and currently the wealthiest person in the world, has a vision of sending autonomous rovers to the Moon and helping to eventually create a Moon Village. He has explained that collaborations with the National Aeronautics and Space Administration (NASA) and other government agencies are encouraged and appreciated, but are no longer essential to achieve his goal. [Musk](https://www.geekwire.com/2018/jeff-bezos-blue-origin-space-venture-go-moon-settlements/), who co-founded Tesla, has already launched nine rockets within the first five months of 2018, one of which was the most powerful private spacecraft [ever sent into orbit](http://sitn.hms.harvard.edu/flash/2018/spacex-launches-falcon-heavy-rocket-successfully/). Looking forward, SpaceX aims to complete its first manned mission to Mars in 2024, almost a decade earlier than NASA’s projections. Even the current US president is encouraging this shift to private companies driving [innovation in space](https://www.washingtonpost.com/news/the-switch/wp/2018/02/11/the-trump-administration-wants-to-turn-the-international-space-station-into-a-commercially-run-venture/?noredirect=on&utm_term=.d2c1eccab4ca). With almost [$1 billion](https://www.forbes.com/sites/alexknapp/2018/04/10/nearly-1-billion-was-invested-in-space-startups-in-1q2018-new-report-says/#5fdd019b285c) invested in space-focused startups in the first quarter of 2018, the commercialized space industry shows no sign of slowing down.

#### Private space appropriation is uniquely key to ensuring ongoing innovation towards space exploration and colonization.

**Cheng 20** [Dean Cheng, 09-16-2020, "Outer Space and Private Property," Heritage Foundation, https://www.heritage.org/space-policy/commentary/outer-space-and-private-property]//DDPT

Fully 53 years after the Outer Space Treaty, however, this has begun to change. The success of SpaceX, Blue Origin, Virgin Galactic, and other private companies has led to what has been termed Space 2.0.

The Obama administration’s decision to rely on commercial space-launch services to resupply the International Space Station opened the door to expanding private enterprise’s role in space.

The innovation exhibited in the various Falcon launches, including the ability to reuse the booster rockets, has seen a significant drop in the cost of placing payloads into orbit. As a result, a real opportunity exists for companies to begin thinking about how to use space not simply to improve terrestrial operations, but to make money from space and its physical resources.

The uncertainty associated with private property rights, however, has had a constraining effect on the ability to exploit space more extensively. Companies are unlikely to be willing to risk capital and assets if they are not sure that they will be able to profit from their investments.

#### The private sector is the key internal link to space exploration and colonization.

**Sharma 9/7** [Maanas Sharma, 9-7-2021, "The Space Review: The privatized frontier: the ethical implications and role of private companies in space exploration," The Space Review, https://www.thespacereview.com/article/4238/1]//DDPT

In recent years, private companies have taken on a larger role in the space exploration system. With lower costs and faster production times, they have displaced some functions of government space agencies. Though many have levied criticism against privatized space exploration, it also allows room for more altruistic actions by government space agencies and the benefits from increased space exploration as a whole. Thus, we should encourage this development, as the process is net ethical in the end. Especially if performed in conjunction with adequate government action on the topic, private space exploration can overcome possible shortcomings in its risky and capitalistic nature and ensure a positive contribution to the general public on Earth.

The implications of commercial space exploration have been thrust into the limelight with the successes and failures of billionaire Elon Musk’s company SpaceX. While private companies are not new to space exploration, their prominence in American space exploration efforts has increased rapidly in recent years, fueled by technological innovations, reductions in cost, and readily available funding from government and private sources.[1] In May 2020, SpaceX brought American astronauts to space from American soil for the first time in almost 10 years.[2] Recognizing the greatly reduced costs of space exploration in private companies, NASA’s budget has shifted to significantly relying on private companies.[3] However, private space companies are unique from government space agencies in the way they experience unique sets of market pressures that influence their decision-making process. Hence, the expansion of private control in the space sector turns into a multifaceted contestation of its ethicality.

The most obvious ethical concern is the loss of human life. Critics contend that companies must answer to their shareholders and justify their profits. This contributes to a larger overall psyche that prioritizes cost and speed above all else, resulting in significantly increased risks.[4] However, the possible increase in mishaps is largely overstated. Companies recognize the need for safety aboard their expeditions themselves.[5] After all, the potential backlash from a mishap could destroy the company’s reputation and significantly harm their prospects. According to Dr. Nayef Al-Rodhan, Head of the Geneva Centre for Security Policy’s Geopolitics and Global Futures Programme, “because there were no alternatives to government space programs, accidents were seen to some degree as par for the course… By comparison, private companies actually have a far more difficult set of issues to face in the case of a mishap. In a worst case scenario, a private company could make an easy scapegoat.” [6]

Another large ethical concern is the prominence capitalism may have in the future of private space exploration and the impacts thereof. The growth of private space companies in recent years has been closely intertwined with capitalism. Companies have largely focused on the most profitable projects, such as space travel and the business of space.[7] Many companies are funded by individual billionaires, such as dearMoon, SpaceX’s upcoming mission to the Moon.[8] Congress has also passed multiple acts for the purpose of reducing regulations on private space companies and securing private access to space. From this, many immediately jump to the conclusion that capitalism in space will recreate the same conditions in outer space that plague Earth today, especially with the increasing push to create a “space-for-space” economy, such as space tourism and new technologies to mine the Moon and asteroids. Critics, such as Jordan Pearson of VICE, believe that promises of “virtually unlimited resources” are only for the rich, and will perpetuate the growing wealth inequality that plagues the world today.[9]

However, others contend that just because private space exploration has some capitalist elements, it is by no means an embodiment of unrestricted capitalism. A healthy balance of restricted capitalism—for example, private space companies working through contracts with government agencies or independently under monitoring and regulation by national and international agreements—will avoid the pitfalls that capitalist colonialism faced down here on Earth. Even those who are generally against excessive government regulation should see the benefits of them in space. Lacking any consensus on definitions and rights in space will create undue competition between corporations as well as governments that will harm everyone rather than helping anyone. To create a conducive environment for new space-for-space exploration, one without confrontation but with protection for corporate astronauts, infrastructure, and other interests, governments must create key policies such as a framework for property rights on asteroids, the Moon, and Mars.[7,10]

Another key matter to note is restricted capitalism in space “could also be our salvation.”[11] Private space exploration could reap increased access to resources and other benefits that can be used to solve the very problems on Earth that critics of capitalism identify. Since governments offset some of their projects to private companies, government agencies can focus on altruistic projects that otherwise would not fit in the budget before and do not have the immediate commercial use that private companies look for. Scott Hubbard, an adjunct professor of aeronautics and astronautics at Stanford University, discusses how “this strategy allows the space agency to continue ‘exploring the fringe where there really is no business case’” but still has important impacts on people down on Earth.[12]

Indeed, this idea is a particularly powerful one when considering the ideal future of private companies in space exploration. Though there is no one set way governments will interact with companies, the consensus is that they must radically reimagine their main purpose as the role of private space exploration continues to grow. As governments utilize services from private space companies, “[i]nstead of being bogged down by the routine application of old research, NASA can prioritize their limited budget to work more on research of other unknowns and development of new long-term space travel technologies.”[13] According to the Council on Foreign Relations, such technologies have far-reaching benefits on Earth as well. Past developments obviously include communications satellites, by themselves a massive benefit to society, but also “refinements in artificial hearts; improved mammograms; and laser eye surgery… thermoelectric coolers for microchips; high-temperature lubricants; and a means for mass-producing carbon nanotubes, a material with significant engineering potential; [and h]ousehold products.”[2] Agencies like NASA are the only actors able to pursue the next game-changing missions, “where the profit motive is not as evident and where the barriers to entry are still too high for the private sector to really make a compelling business case.”[8] These technologies have revolutionized millions, if not billions, of lives, demonstrating the remarkable benefits of space exploration. It follows then that it is net ethical to prioritize these benefits.

This report concludes that the private sector, indeed, has a prominent role to play in the future of space exploration. Further, though private space exploration does bring the potential of increased danger and the colonization of space, these concerns can be effectively mitigated. Namely, strong government frameworks—particularly international ones—will minimize possible sources of ethical violations and ensure an optimal private sector role in space. This also allows government agencies to complete significantly more difficult, innovative projects which have transformative benefits for life on Earth.

#### Space exploration solves extinction and endless resource wars.

Collins 10 [Patrick Collins, professor of economics at Azabu University in Japan, and a Collaborating Researcher with the Institute for Space & Astronautical Science, as well as adviser to a number of companies, Adriano V. Autino is President of the Space Renaissance International; Manager, CEO/CTO, Systems Engineering Consultant / Trainer at Andromeda Systems Engineering LLC; and Supplier of methodological tools and consultancy at Intermarine S.p.A, Acta Astronautica, Volume 66, Issues 11–12, June–July 2010, “What the growth of a space tourism industry could contribute to employment, economic growth, environmental protection, education, culture and world peace”, Pages 1553–1562]

7. World peace and preservation of human civilisation

The major source of social friction, including international friction, has surely always been unequal access to resources. People fight to control the valuable resources on and under the land, and in and under the sea. The natural resources of Earth are limited in quantity, and economically accessible resources even more so. As the population grows, and demand grows for a higher material standard of living, industrial activity grows exponentially. The threat of resources becoming scarce has led to the concept of “Resource Wars”. Having begun long ago with wars to control the gold and diamonds of Africa and South America, and oil in the Middle East, the current phase is at centre stage of world events today [37]. A particular danger of “resource wars” is that, if the general public can be persuaded to support them, they may become impossible to stop as resources become increasingly scarce. Many commentators have noted the similarity of the language of US and UK government advocates of “war on terror” to the language of the novel “1984” which describes a dystopian future of endless, fraudulent war in which citizens are reduced to slaves.

7.1. Expansion into near-Earth space is the only alternative to endless “resource wars”

As an alternative to the “resource wars” already devastating many countries today, opening access to the unlimited resources of near-Earth space could clearly facilitate world peace and security. The US National Security Space Office, at the start of its report on the potential of space-based solar power (SSP) published in early 2007, stated: “Expanding human populations and declining natural resources are potential sources of local and strategic conflict in the 21st Century, and many see energy as the foremost threat to national security” [38]. The report ended by encouraging urgent research on the feasibility of SSP: “Considering the timescales that are involved, and the exponential growth of population and resource pressures within that same strategic period, it is imperative that this work for “drilling up” vs. drilling down for energy security begins immediately” [38].

Although the use of extra-terrestrial resources on a substantial scale may still be some decades away, it is important to recognise that simply acknowledging its feasibility using known technology is the surest way of ending the threat of resource wars. That is, if it is assumed that the resources available for human use are limited to those on Earth, then it can be argued that resource wars are inescapable [22] and [37]. If, by contrast, it is assumed that the resources of space are economically accessible, this not only eliminates the need for resource wars,