# NC

[brackets for clarification]

### T -- mining

#### Interp – space mining isn’t appropriation – its not permanent and OST consensus.

Hofmann and Bergamasco 19 [Mahulena Hofmann (SES Chair in Space, SatCom and Media Law at the University of Luxembourg) and Federico Bergamasco (PhD Researcher in aviation, telecommunication and space law University of Luxembourg). “Space resources activities from the perspective of sustainability: legal aspects”. Global Sustainability. 9 December 2019. Accessed 12/18/21. <https://www.cambridge.org/core/services/aop-cambridge-core/content/view/DF153F4A77970AC9E12444EC2B001F8A/S2059479819000279a.pdf/div-class-title-space-resources-activities-from-the-perspective-of-sustainability-legal-aspects-div.pdf> //Xu]

However, the purpose of space mining activities is considered to be neither any ‘appropriation’ of parts of outer space nor of space resources in situ. Instead, the sole aim of any such activities is their extraction, use and commercialization, without any territorial demands or titles as to the celestial bodies (or parts thereof) concerned (Mizushima et al., 2017). The argument, which sees in the use or exploitation of a space mineral by one subject a limitation of the same right of another subject, is difficult to contest by other means than analogy with space exploration. As has been recognized by the drafters of the OST in its Articles IX and XII, a purely scientific project in one area of outer space could de facto prevent research at the same site by a subject from another State. To avoid such situations, the Treaty pre-envisages a system of international consultations aimed at avoiding any harmful interference with operations.

### NC -- Nozick NC

#### The value must be justice, defined as giving each their due, as per the word ‘unjust’ in the resolution. Justice is distinct from ethics – what’s just is what arises out of a just history of transfers regardless of the outcomes.

Nozick 74 [Robert Nozick, Renowned American Philosopher, “Anarchy, State and Utopia,” Part II, Section I, ]/ lm

If the hypothetical just history involves each person's consenting to the institutional structure and to any limitations on his rights (specified by the moral side constraints on the behavior of others) it embodies, then if some actual person would not consent, one must view the institutional structure as unjust (unless it counts as just via some other hypothetical history). Similarly, one must hold the institutional structure unjust if the hypothetical just history involves some people's consenting who didn't, and some now would not assent to those others having done so. If the institutional structure could arise by some hypothetical just history which does not involve anyone's consent to that structure, then one's evaluation of the structure will depend upon one's evaluation of the process which would give rise to it. If that process is viewed as better (along dimensions other than justice where, by hypothesis, it excels) than the actual history, this probably will improve one's evaluation of the structure. That a just process would have led to the institutional structure, but only if manned by despicable individuals, will not enhance one's evaluation of that institutional structure.

The entitlement principles of justice in holdings that we have sketched are historical principles of justice. To better understand their precise character, we shall distinguish them from another subclass of the historical principles. Consider, as an example, the principle of distribution according to moral merit. This principle requires that total distributive shares vary directly with moral merit; no person should have a greater share than anyone whose moral merit is greater. (If moral merit could be not merely ordered but measured on an interval or ratio scale, stronger principles could be formulated.) Or consider the principle that results by substituting “usefulness to society” for “moral merit” in the previous principle. Or instead of “distribute according to moral merit,” or “distribute according to usefulness to society,” we might consider “distribute according to the weighted sum of moral merit, usefulness to society, and need,” with the weights of the different dimensions equal. Let us call a principle of distribution patterned if it specifies that a distribution is to vary along with some natural dimension, weighted sum of natural dimensions, or lexicographic ordering of natural dimensions. And let us say a distribution is patterned if it accords with some patterned principle. (I speak of natural dimensions, admittedly without a general criterion for them, because for any set of holdings some artificial dimensions can be gimmicked up to vary along with the distribution of the set.) The principle of distribution in accordance with moral merit is a patterned historical principle, which specifies a patterned distribution. “Distribute according to I.Q.” is a patterned principle that looks to information not contained in distributional matrices. It is not historical, however, in that it does not look to any past actions creating differential entitlements to evaluate a distribution; it requires only distributional matrices whose columns are labeled by I.Q. scores. The distribution in a society, however, may be composed of such simple patterned distributions, without itself being simply patterned. Different sectors may operate different patterns, or some combination of patterns may operate in different proportions across a society. A distribution composed in this manner, from a small number of patterned distributions, we also shall term “patterned.” And we extend the use of “pattern” to include the overall designs put forth by combinations of end-state principles.

Whether or not Locke’s particular theory of appropriation can be spelled out so as to handle various difficulties, I assume that any adequate theory of justice in acquisition will contain a proviso similar to the weaker of the ones we have attributed to Locke. A process normally giving rise to a permanent bequeathable property right in a previously unowned thing will not do so if the position of others no longer at liberty to use the thing is thereby worsened. It is important to specify this particular mode of worsening the situation of others, for the proviso does not encompass other modes. It does not include the worsening due to more limited opportunities to appropriate (the first way above, corresponding to the more stringent condition), and it does not include how I “worsen” a seller’s position if I appropriate materials to make some of what he is selling, and then enter into competition with him. Someone whose appropriation otherwise would violate the proviso still may appropriate provided he compensates the others so that their situation is not thereby worsened; unless he does compensate these others, his appropriation will violate the proviso of the principle of justice in acquisition and will be an illegitimate one.\* A theory of appropriation incorporating this Lockean proviso will handle correctly the cases (objections to the theory lacking the proviso) where someone appropriates the total supply of something necessary for life.\*

#### Thus, the value criterion is consistency with the Self Ownership Proviso.

Feser 05 [Edward C. Feser is an American philosopher. He is Associate Professor of Philosophy at Pasadena City College in Pasadena, California, Social Philosophy and Policy Foundation, “There is no such thing as unjust initial acquisition,” Section II]/ lm

If what I have argued so far is correct, then the way is opened to the following revised case for strongly libertarian Lockean-Nozickian prop erty rights: We are self-owners, having full property rights to our body parts, powers, talents, energies, etc. As self-owners, we also have a right, given the SOP, not to have our self-owned powers nullified—we have the right, that is, to act within the extra-personal world and thus to acquire rights to extra-personal objects that the use of our self-owned powers requires.39 This might involve the buying or leasing of certain rights or bundles of rights and, correspondingly, the acquiring of lesser or greater degrees of ownership of parts of the external world, but as long as one is able to exercise one’s powers to some degree and is not rendered incapable of acting within that world, the SOP is satisfied. In any case, such rights can only be traded after they are first established by initial acquisition. In initially acquiring a resource, an agent does no one an injustice (it was unowned, after all). Furthermore, he has mixed his [their] labor with the resource, significantly altering it and/or bringing it under his control, and is himself solely responsible for whatever [the] value or utility the resource has come to have. Thus, he has a presumptive right to it, and, if his control and/or alteration (and thus acquisition) of it is (more or less) complete, his ownership is accordingly (more or less) full. The system of strong private property rights that follows from the acts of initial acquisition performed by countless such agents results, as a matter of empirical fact, in a market economy that inevitably and dramatically increases the number of resources available for use by individuals, and these benefited individuals include those who come along long after initial acquisition has taken place. (Indeed, it especially includes these latecomers, given that they were able to avoid the hard work of being the first to “tame the land” and draw out the value of raw materials.)40 The SOP is thus, in fact, rarely, if ever, violated. The upshot is that a system of Lockean-Nozickian private property rights is morally justified, with a strong presumption against tampering with existing property titles in general. In any case, there is a strong presumption against any general egalitarian redistribution of wealth, and no case whatsoever to be made for such redistribution from the general theory of property just sketched, purged as it is of the Lockean proviso, with all the egalitarian mischief-making the proviso has made possible.

This outcome has the virtue of restoring to Nozick’s system the theoretical simplicity and elegance that his (rather unsystematically articulated) commitment to the Lockean proviso threatened to distort. At the same time, replacement of the Lockean proviso with the self-ownership proviso allows us to sidestep the (arguably) counterintuitive consequences of rejecting the former. Still, since there is no such thing as an unjust initial acquisition, very strong property rights to unowned external objects come to be quite easy to obtain; and they, together with the thesis of self-ownership, give us Nozick’s principle of justice in transfer, with all its highly anti-egalitarian and anti-redistributionist consequences. The picture that results is very much a libertarianism with foundations.

#### Prefer --

#### 1] Justice is intrinsic and not based in consequences -- its not just to imprison an innocent person even if it deters others from committing crime.

#### 2] Performativity -- debate presumes you have ownership over a] yourself and b] your labor in the form of args, and c] that you have freedom of speech.

#### 3] Textuality -- Self Ownership is most textual as it specifically outlines how appropriation relates to justice, and when its unjust.

#### Now negate – Appropriation in initial acquisition of space isn’t unjust since no one has a claim to it.

Feser 05 [Edward C. Feser is an American philosopher. He is Associate Professor of Philosophy at Pasadena City College in Pasadena, California, Social Philosophy and Policy Foundation, “There is no such thing as unjust initial acquisition,” Section II]/ lm

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.

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 intuitions 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 acquisition and use of property. Section V shows how the results of the previous 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 understanding of Nozick’s principles of transfer and rectification.

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 [them to] commits an injustice in acquiring R, it [there] 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 acquisition of R, B [they] 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 someone 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

### NC -- Mining DA

#### The private sector is set to start asteroid mining through innovation and investment happening now.

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

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 spaceresources law, recognizing the property rights of private companies and individuals to materials gathered in space.

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

What’s Out There

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

In the past several decades, planetary science has confirmed what has long been suspected: celestial bodies are potential sources for dozens of natural materials that, in the right time and place, are incredibly valuable. Of these, water may be the most attractive in the near-term, because — with assistance from solar energy or nuclear fission — H2O can be split into hydrogen and oxygen to make rocket propellant, facilitating in-space refueling. So-called “rare earth” metals are also potential targets of asteroid miners [are] 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.

#### Asteroid mining boosts the economy, solves resource scarcity, lowers costs of space exploration, and solves climate change.

Mallick 19 [Senjuti Mallick graduated from ILS Law College, Pune, in 2016. She was a Law Researcher at the High Court of Delhi from 2016 to 2018 and is currently pursuing LL.M in International Law at The Fletcher School of Law and Diplomacy, USA. She has been doing research on Outer Space Law since she was a student at ILS. Presently, she is working on different aspects of Space Law, in particular, Space debris mitigation and removal, and the law of the commons. She has published articles on Space Law in the All India Reporter Law Journal and The Hindu, Dr Rajeswari (Raji) Pillai Rajagopalan is the Director of the Centre for Security, Strategy and Technology (CSST) at the Observer Research Foundation, New Delhi.  Dr Rajagopalan was the Technical Advisor to the United Nations Group of Governmental Experts (GGE) on Prevention of Arms Race in Outer Space (PAROS) (July 2018-July 2019).  She was also a Non-Resident Indo-Pacific Fellow at the Perth USAsia Centre from April-December 2020.  As a senior Asia defence writer for The Diplomat, she writes a weekly column on Asian strategic issues, Observer Research Foundation, “If space is ‘the province of mankind’, who owns its resources?” January 24th 2019, <https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn8]/> lm

Indeed, the economic imperative for space mining is evident and analysts predict that these extraction activities could translate to a multibillion-dollar industry. NASA estimates, for example, that the [value of asteroids](https://metro.co.uk/2018/06/11/new-asteroid-gold-rush-earn-everyone-earth-75-billion-7622439/)out there could be in the vicinity of US$700 quintillion – that amount is roughly equivalent to US$95 billion for each of us here on Earth.[[iv]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn4)  Another major attraction for the prospective extraterrestrial mining companies is the availability of precious minerals in abundance on the Moon, on Mars and the asteroids (among them—lithium, cobalt, nickel, copper, zinc, niobium, molybdenum, lanthanum, europium, tungsten, and gold).[[v]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn5) After all, these metals and mineral resources have grown scarce on Earth, and both governments and commercial actors are pushing to look to celestial bodies for resources.[[vi]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn6)

Technological innovation—primarily brought about by commercial players such as Elon Musk[[2]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_ftn2) and Jeff Bezos[[3]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_ftn3)—is changing the landscape of space exploration. Leading the way in this new-era race are the startups including Planetary Resources, Deep Space Industries, Ispace, and Kleos Space.[[vii]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn7) Research into the feasibility of human and robotic missions to asteroids is being conducted by both governmental organisations, like NASA and JAXA (Japan Aerospace Exploration Agency), as well as private companies such as Planetary Resources.[[viii]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn8) However, for realising affordable space travel and space industrialisation, it is essential to find extraterrestrial materials such as metals, minerals and water that do not have to be transported from Earth. Thus, the first objective in carrying out asteroid mining activity is to obtain elements that are critical for basic sustenance on Earth. It has been identified that the asteroid belt in our solar system contains eight-percent metal-rich (M type) asteroids and 75-percent volatile-rich carbonaceous (C type) asteroids.[[ix]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn9)

The second incentive for celestial mining companies is to haul precious minerals and cargo raw materials to Earth to fuel its fast depleting resources. This would significantly increase the mining company’s valuation and greatly impact the global economy. According to a 2012 Reuters interview with Planetary Resources, a 30-meter-long (98-foot) asteroid can hold platinum worth somewhere from US$25 billion to US$50 billion.[[x]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn10)  These metals are highly useful and valuable, both on Earth and in space.[[xi]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn11)

Third, asteroids give humans the potential to create tools in space, since iron, nickel and cobalt are in abundance.[[xii]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn12) Chris Lewicki, Planetary Resources CEO, has said, “Using 3D printing technology one can grab material off asteroids and 3D print something that never has to be on a rocket. Tools, machines and even habitats can then be built off Earth, reducing the cost of exploration even further.[[xiii]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn13) Fourth, resource extraction is also becoming a focus for many Middle Eastern nations.[[xiv]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn14) The Middle Eastern oil States, such as Saudi Arabia and the United Arab Emirates are investing heavily in this industry as they are looking at space as a way to diversify out of the earthly benefits of fossil fuel.[[xv]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn15) Fifth, countries such as India and China are looking to mine the Moon for extracting Helium-3, which is considered a clean and efficient form of energy. It is thought that th[at]is isotope could provide safer nuclear energy in a fusion reactor, since it is not radioactive and would not produce dangerous waste products.[[xvi]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn16)

Finally, the water available in outer space could be used to make rocket propellants. According to scientists, since water is abundant in outer space, in some or the other form, it could be extracted and electrolysed to derive hydrogen and oxygen, the key ingredients of rocket fuel.[[xvii]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn17) Thus, instead of carrying one’s own fuel all the way, asteroids could serve as extraterrestrial/orbital “gas stations” for fuelling future deep space missions. This would simultaneously make space travel more cost-effective and productive. Such ventures are also seen to be intrinsic to further science and discovery, in addition to revolutionising commercial development in outer space. The mining of asteroids could also provide a near-infinite [supply of the precious resources for Earth to use.](https://www.telegraph.co.uk/finance/newsbysector/industry/mining/9222766/Planetary-Resources-unveils-cosmic-plan-to-boldly-go-and-mine-asteroids-for-gold-and-platinum.html)[[xviii]](https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/#_edn18)

#### Extinction.

Strona 18 Giovanni, Flinders University, Bradshaw, Corey J. A., Scientific Reports, Science Daily, “Climate Change risks ‘extinction domino effect,’” https://www.sciencedaily.com/releases/2018/11/181129122506.htm

New research reveals the extinction of plant or animal species from extreme environmental change increases the risk of an [leads to] 'extinction domino effect' that could annihilate all life on Earth. This would be the worst-case scenario of what scientists call 'co-extinctions', where an organism dies out because it depends on another doomed species, with the findings published today in the journal Scientific Reports. Think of a plant's flower pollinated by only one species of bee -- if the bee becomes extinct, so too will the plant eventually. "Even the most resilient species will inevitably fall victim to the synergies among extinction drivers as extreme stresses drive ecosystems to collapse." says lead author Dr Giovanni Strona of the European Commission's Joint Research Centre based in Ispra in northern Italy. Researchers from Italy and Australia simulated 2,000 'virtual earths' linking animal and plant species. Using sophisticated modelling, they subjected the virtual earths to catastrophic environmental changes that ultimately annihilated all life. Examples of the kinds of catastrophes they simulated included runaway global warming, scenarios of 'nuclear winter' following the detonation of multiple atomic bombs, and a large asteroid impact. "What we were trying to test is whether the variable tolerances to extreme global heating or cooling by different species are enough to explain overall extinction rates," "But because all species are connected in the web of life, our paper demonstrates that even the most tolerant species ultimately succumb to extinction when the less-tolerant species on which they depend disappear." "Failing to take into account these co-extinctions therefore underestimates the rate and magnitude of the loss of entire species from events like climate change by up to 10 times," says co-author Professor Bradshaw of Flinders University in South Australia Professor Bradshaw and Dr Strona say that their virtual scenarios warn humanity not to underestimate the impact of co-extinctions. "Not taking into account this domino effect gives an unrealistic and exceedingly optimistic perspective about the impact of future climate change," warns Professor Bradshaw. It can be hard to imagine how the demise of a small animal or plant matters so much, but the authors argue that tracking species up to total annihilation demonstrates how the loss of one can amplify the effects of environmental change on the remainder. "Another really important discovery was that in the case of global warming in particular, the combination of intolerance to heat combined with co-extinctions mean that 5-6 degrees of average warming globally is enough to wipe out most life on the planet," says Dr Strona. Professor Bradshaw further warns that their work shows how climate warming creates extinction cascades in the worst possible way, when compared to random extinctions or even from the stresses arising from nuclear winter.

### NC -- Reg CP

#### Counterplan: Establish an international body to regulate Commercial Space Activity.

**Iliopoulos 20** [Iliopoulos, Nikolaos [University of Tokyo], and Miguel Esteban [Waseda University]. "Sustainable space exploration and its relevance to the privatization of space ventures." Acta Astronautica 167 (2020): 85-92.]

The envisioned legal regime to encourage private firms to undertake the high risk and high cost involved in activities of space exploration would have to explicitly recognize extra-terrestrial property claims of individuals and corporations that meet specified conditions. As such, based on the conclusions made through this paper ,it is considered that with the right negotiation terms, the current treaties can be revised so as to become steppingstones for the advancement of space exploration that could potentially bring forth significant changes to the environment surrounding planet Earth. Finally, one way that such privatization efforts could be seen to benefit of [hu]mankind as a whole is that any taxation resulting from it should be paid directly to the United Nations, or that at least some fraction of the profits should fund this organization.

#### That solves space debris and other concerns of space mining.

Fladeland 19 [Fellow at the Outer Space Institute, Logan, Aaron C. Boley, Michael Byers, Meteoroid Stream Formation Due to the Extraction of Space Resources from Asteroids, Conference paper for the 1st International Orbital Debris Conference, December 2019, <https://arxiv.org/abs/1911.12840>, accessed 6-25-21]

Fortunately, it may be possible to establish simple measures that could mitigate some of these concerns, particularly the formation of debris streams with non-trivial mass fluxes. Examples include establishing an international body with the authority to grant mining permits, much like the International Seabed Authority established under the 1982 United Nations Convention on the Law of the Sea. In any scenario, safety and sustainability requirements should be part of the licensing regime. Some of these requirements could limit mining rates or require a company to produce a risk-to-Earth assessment plan. Some asteroids could even be deemed untouchable for safety or scientific reasons. As space law is redefined in the NewSpace era, it must be fully informed by the astrophysical context.

### Underview

#### Presumption negates – infinite ways for something to be false but only one way for them to be true, and the aff has the burden of proof. Permissibility negates – doing the aff isn’t obligatory then the squo is permissible.

# Case