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### Advantage 1: Space Debris

#### Private companies are cramming satellites into the Earth’s orbit which are quickly becoming defunct pieces of “space junk.”

Therese **Wood, 20** - ("Who owns our orbit: Just how many satellites are there in space?," World Economic Forum, 10-23-2020, 12-8-2021, https://www.weforum.org/agenda/2020/10/visualizing-easrth-satellites-sapce-spacex)//AW

There are nearly 6,000 satellites circling the Earth, but only 40% are operational. Satellites are a vital part of our infrastructure, helping us to use GPS, access the internet and support studies of the Earth. Out of the 2,666 operational satellites circling the globe in April 2020, 1,007 were for communication services. 446 are used for observing the Earth and 97 for navigation/ GPS purposes. Over half of satellites in space are non-operational. For centuries, humans have looked to space and the stars for answers. The fascination is more than philosophical—it’s coupled with the need to solve problems here on Earth. Today, there are seemingly countless benefits and applications of space technology. Satellites, for instance, are becoming critical for everything from internet connectivity and precision agriculture, to border security and archaeological study. Right now, there are nearly 6,000 satellites circling our tiny planet. About 60% of those are defunct satellites—space junk—and roughly 40% are operational. As highlighted in the chart above, The Union of Concerned Scientists (UCS), determined that 2,666 operational satellites circled the globe in April of 2020. Over the coming decade, it’s estimated by Euroconsult that 990 satellites will be launched every year. This means that by 2028, there could be 15,000 satellites in orbit. Nearly 10,000 satellites will be launched form 2019-2028. Image: Visual Capitalist With SpaceX’s planned Starlink constellation of 12,000 satellites and Amazon’s proposed constellation in the works, the new space race continues its acceleration. Let’s take a closer look at who operates those satellites and how they apply their technology. Technology with a purpose Humans have long used space for navigation. While sailors once relied on the stars, today we use satellites for GPS, navigation, and various other applications. More than half of Earth’s operational satellites are launched for commercial purposes. About 61% of those provide communications, including everything from satellite TV and Internet of Things (IoT) connectivity to global internet. Over 1,000 satellites are for communication purposes. Image: Visual Capitalist Second to communications, 27% of commercial satellites have been launched for Earth Observation (EO) purposes, including environmental monitoring and border security. Commercial satellites, however, can serve multiple purposes. One week, a satellite may be ‘tasked’ to image a contested border. It could later be tasked to monitor the reclamation of a mining site or even the aftermath of a natural disaster. 54% of operational satellites are for commercial use. Image: Visual Capitalist Government and civil purposes make up 21% of all of Earth’s operational satellites, and military purposes come in at 13%. Who owns Earth’s orbit? Space operators SpaceX—founded by Elon Musk—is not only a disruptive launch provider for missions to the International Space Station (saving NASA millions). It’s also the largest commercial operator of satellites on the planet. With 358 satellites launched as of April, part of SpaceX’s mission is to boost navigation capabilities and supply the world with space-based internet. While the company operated 22% of the world’s operational satellites as of April, it went on to launch an additional 175 satellites in the span of one month, from August to September 2020.

#### Increasing space debris levels will inevitably set off a chain of collisions.

Chelsea **MuñOz-Patchen, 19** - ("Regulating the Space Commons: Treating Space Debris as Abandoned Property in Violation of the Outer Space Treaty," University of Chicago, 2019, 12-6-2021, https://cjil.uchicago.edu/publication/regulating-space-commons-treating-space-debris-abandoned-property-violation-outer-space)//AW

Debris poses a threat to functioning space objects and astronauts in space, and may cause damage to the earth’s surface upon re-entry.29 Much of the small debris cannot be tracked due to its size and the velocity at which it travels, making it impossible to anticipate and maneuver to avoid collisions.30 To remain in orbit, debris must travel at speeds of up to 17,500 miles per hour.31 At this speed even very small pieces of debris can cause serious damage, threatening a spacecraft and causing expensive damage.32 There are millions of these very small pieces, and thousands of larger ones.33 The small-to-medium pieces of debris “continuously shed fragments like lens caps, booster upper stages, nuts, bolts, paint chips, motor sprays of aluminum particles, glass splinters, waste water, and bits of foil,” and may stay in orbit for decades or even centuries, posing an ongoing risk.34 Debris ten centimeters or larger in diameter creates the likelihood of complete destruction for any functioning satellite with which it collides.35 Large nonfunctional objects remaining in orbit are a collision threat, capable of creating huge amounts of space debris and taking up otherwise useful orbit space.36 This issue is of growing importance as more nations and companies gain the ability to launch satellites and other objects into space.37 From February 2009 through the end of 2010, more than thirty-two collision-avoidance maneuvers were reportedly used to avoid debris by various space agencies and satellite companies, and as of March 2012, the crew of the International Space Station (ISS) had to take shelter three times due to close calls with passing debris.38 These maneuvers require costly fuel usage and place a strain on astronauts.39 Furthermore, the launches of some spacecraft have “been delayed because of the presence of space debris in the planned flight paths.”40 In 2011, Euroconsult, a satellite consultant, projected that there would be “a 51% increase in satellites launched in the next decade over the number launched in the past decade.”41 In addition to satellites, the rise of commercial space tourism will also increase the number of objects launched into space and thus the amount of debris.42 The more objects are sent into space, and the more collisions create cascades of debris, the greater the risk of damage to vital satellites and other devices relied on for “weather forecasting, telecommunications, commerce, and national security.”43 The Space Debris Mitigation Guidelines44 were created by UNCOPUOS with input from the IADC and adopted in 2007.45 The guidelines were developed to address the problem of space debris and were intended to “increase mutual understanding on acceptable activities in space.”46 These guidelines are nonbinding but suggest best practices to implement at the national level when planning for a launch. Many nations have adopted the guidelines to some degree, and some have gone beyond what the guidelines suggest.47 While the guidelines do not address existing debris, they do much to prevent the creation of new debris. The Kessler Syndrome is the biggest concern with space debris. The Kessler Syndrome is a cascade created when debris hits a space object, creating new debris and setting off a chain reaction of collisions that eventually closes off entire orbits.48 The concern is that this cascade will occur when a tipping point is reached at which the natural removal rate cannot keep up with the amount of new debris added.49 At this point a collision could set off a cascade destroying all space objects within the orbit.50 In 2011, The National Research Council predicted that the Kessler Syndrome could happen within ten to twenty years.51 Donald J. Kessler, the astrophysicist and NASA scientist who theorized the Kessler Syndrome in 1978, believes this cascade may be a century away, meaning that there is still time to develop a solution.52

#### It cascades with catastrophic results including nuclear war, mass starvation, and economic destruction.

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Whatever the initial cause, the result may be the same. A satellite destroyed in orbit will break apart into thousands of pieces, each traveling at over 8 km/sec. This virtual shotgun blast, with pellets traveling 20 times faster than a bullet, will quickly spread out, with each pellet now following its own orbit around the Earth. With over 300,000 other pieces of junk already there, the tipping point is crossed and a runaway series of collisions begins. A few orbits later, two of the new debris pieces strike other satellites, causing them to explode into thousands more pieces of debris. The rate of collisions increases, now with more spacecraft being destroyed. Called the "Kessler Effect", after the NASA scientist who first warned of its dangers, these debris objects, now numbering in the millions, cascade around the Earth, destroying every satellite in low Earth orbit. Without an atmosphere to slow them down, thus allowing debris pieces to bum up, most debris (perhaps numbering in the millions) will remain in space for hundreds or thousands of years. Any new satellite will be threatened by destruction as soon as it enters space, effectively rendering many Earth orbits unusable. But what about us on the ground? How will this affect us? Imagine a world that suddenly loses all of its space technology. If you are like most people, then you would probably have a few fleeting thoughts about the Apollo-era missions to the Moon, perhaps a vision of the Space Shuttle launching astronauts into space for a visit to the International Space Station (ISS), or you might fondly recall the "wow" images taken by the orbiting Hubble Space Telescope. In short, you would know that things important to science would be lost, but you would likely not assume that their loss would have any impact on your daily life. Now imagine a world that suddenly loses network and cable television, accurate weather forecasts, Global Positioning System (GPS) navigation, some cellular phone networks, on-time delivery of food and medical supplies via truck and train to stores and hospitals in virtually every community in America, as well as science useful in monitoring such things as climate change and agricultural sustainability. Add to this the [disabling] ~~crippling~~ of the US military who now depend upon spy satellites, space-based communications systems, and GPS to know where their troops and supplies are located at all times and anywhere in the world. The result is a nightmarish world, one step away from nuclear war, economic disaster, and potential mass starvation. This is the world in which we are now perilously close to living. Space satellites now touch our lives in many ways. And, unfortunately, these satellites are extremely vulnerable to risks arising from a half-century of carelessness regarding protecting the space environment around the Earth as well as from potential adversaries such as China, North Korea, and Iran. No government policy has put us at risk. It has not been the result of a conspiracy. No, we are dependent upon them simply because they offer capabilities that are simply unavailable any other way. Individuals, corporations, and governments found ways to use the unique environment of space to provide services, make money, and better defend the country. In fact, only a few space visionaries and futurists could have foreseen where the advent of rocketry and space technology would take us a mere 50 years since those first satellites orbited the Earth. It was the slow progression of capability followed by dependence that puts us at risk. The exploration and use of space began in 1957 with the launch of Sputnik 1 by the Soviet Union. The United States soon followed with Explorer 1. Since then, the nations of the world have launched over 8,000 spacecraft. Of these, several hundred are still providing information and services to the global economy and the world's governments. Over time, nations, corporations, and individuals have grown accustomed to the services these spacecraft provide and many are dependent upon them. Commercial aviation, shipping, emergency services, vehicle fleet tracking, financial transactions, and agriculture are areas of the economy that are increasingly reliant on space. Telestar 1, launched into space in the year of my birth, 1962, relayed the world's first live transatlantic news feed and showed that space satellites can be used to relay television signals, telephone calls, and data. The modern telecommunications age was born. We've come a long way since Telstar; most television networks now distribute most, if not ali, of their programming via satellite. Cable television signals are received by local providers from satellite relays before being sent to our homes and businesses using cables. With 65% of US households relying on cable television and a growing percentage using satellite dishes to receive signals from direct-to-home satellite television providers, a large number of people would be cut off from vital information in an emergency should these satellites be destroyed. And communications satellites relay more than television signals. They serve as hosts to corporate video conferences and convey business, banking, and other commercial information to and from all areas of the planet. The first successful weather satellite was TIROS. Launched in 1960, TIROS operated for only 78 days but it served as the precursor for today's much more long-lived weather satellites, which provide continuous monitoring of weather conditions around the world. Without them, providing accurate weather forecasts for virtually any place on the globe more than a day in advance would be nearly impossible. Figure !.1 shows a satellite image of Hurricane Ivan approaching the Alabama Gulf coast in 2004. Without this type of information, evacuation warnings would have to be given more generally, resulting in needless evacuations and lost economic activity (from areas that avoid landfall) and potentially increasing loss of life in areas that may be unexpectedly hit. The formerly top-secret Corona spy satellites began operation in 1959 and provided critical information about the Soviet Union's military and industrial capabilities to a nervous West in a time of unprecedented paranoia and nuclear risk. With these satellites, US military planners were able to understand and assess the real military threat posed by the Soviet Union. They used information provided by spy satellites to help avert potential military confrontations on numerous occasions. Conversely, the Soviet Union's spy satellites were able to observe the United States and its allies, with similar results. It is nearly impossible to move an army and hide it from multiple eyes in the sky. Satellite information is critical to all aspects of US intelligence and military planning. Spy satellites are used to monitor compliance with international arms treaties and to assess the military activities of countries such as China, Russia, Iran, and North Korea. Figure 1.2 shows the capability of modem unclassified space-based imaging. The capability of the classified systems is presumed to be significantly better, providing much more detail. Losing these satellites would place global militaries on high alert and have them operating, literally, in the blind. Our military would suddenly become vulnerable in other areas as well. GPS, a network of 24-32 satellites in medium-Earth orbit, was developed to provide precise position information to the military, and it is now in common use by individuals and industry. The network, which became fully operational in 1993, allows our armed forces to know their exact locations anywhere in the world. It is used to guide bombs to their targets with unprecedented accuracy, requiring that only one bomb be used to destroy a target that would have previously required perhaps hundreds of bombs to destroy in the pre-GPS world (which, incidentally, has resulted in us reducing our stockpile of non-GPS-guided munitions dramatically). It allows soldiers to navigate in the dark or in adverse weather or sandstorms. Without GPS, our military advantage over potential adversaries would be dramatically reduced or eliminated.

### Advantage 2: Colonialism

#### Private appropriation of space instead of treating it as a global commons amplifies inequality on Earth. Stockwell 20

Samuel Stockwell, 7-20-2020, "Legal ‘Black Holes’ in Outer Space: The Regulation of Private Space Companies," E-International Relations, <https://www.e-ir.info/2020/07/20/legal-black-holes-in-outer-space-the-regulation-of-private-space-companies/> //marlborough JH

On 30th April 2020, NASA – the US government’s space agency ­– awarded three private space companies a joint-contract worth $967m to complete a lunar mission by 2024, in what was celebrated as “the last piece that [America] need[s] in order to get to the moon” by NASA administrator Jim Brindestine (The Telegraph, 2020). Yet, whilst this development was widely covered in the media, less coverage has focused on the extent to which existing international legislation surrounding outer space endeavours appropriately applies to private entities. Indeed, the prospect of a corporate foothold within the extra-terrestrial domain has thrown up both a mixture of optimism and concern regarding the potential benefits of expanding capital projects into space (Adolph, 2006; Dickens & Ormrod, 2007). ¶By adopting the 1967 UN Outer Space Treaty (OST) as an analytical framework in relation to the rise of the so-called US ‘NewSpace’ actors, this essay argues that there are significant legal ambiguities regarding the status of private space companies in orbital space. Such loopholes allow the US government to circumvent its own obligations to the OST, whilst simultaneously undermining the notion of space as a ‘global commons’ through a commodification process. The lack of specificity within the OST surrounding private property rights over extra-terrestrial resources risks the prospect of reinforcing Earth-bound wealth inequalities and US dominance in space, by restricting the potential economic benefits for the broader global citizenry in favour of a narrow class of wealthy American investors. Moreover, the OST’s weak clause regarding the regulation of space surveillance risks the incentivisation of a ‘global panopticon’ network of US satellites. The rise of dual-use technology is blurring the boundaries between military and civilian observations, raising serious ethical concerns over the nature of US space-based data collection. Finally, the increasing number of private satellite constellations is facilitating the possibility of cataclysmic space debris collisions which could exacerbate geopolitical tensions. Such developments are also contributing towards the contamination of the broader space environment in ways that the OST had never envisioned. ¶The UN Outer Space Treaty and Rise of the ‘NewSpace’ Actors ¶Although ratified into international law in 1967, the UN Outer Space Treaty (OST) is perhaps still the most relevant piece of legislation for analysing state and non-state entity activity in outer space. Designed to prevent both the militarisation of space and national appropriation of celestial bodies at the height of Cold War tensions, the UN OST holds significant influence as a form of customary international law (Hebert, 2014: 6). Ratified by over 100 nations – including major spacefaring nations such as the United States, Russia and China – the treatyis widely accepted as an authoritative document and has formed the basis for all other space treaties that have succeeded it (Kramer, 2017: 129). This is in contrast to more recent legislation such as the 1972 Moon Treaty designed to promote cooperation in Moon exploration and development, which the US and other major space superpowers have refrained from signing (Adolph, 2006: 968-969).  ¶The type of American actors becoming involved in the realm of outer space has undergone significant diversification. Despite working alongside NASA since the 1950s, commercial enterprises were largely confined to the manufacturing of parts utilised in rockets and other equipment for space activities (Lal, 2016: 63-66). However, the continuous sharp decline in NASA’s overall budget that has occurred since the Apollo 11 moon landing, and the increasing trends towards the privatisation of government functions has drastically altered both the capabilities and the outlooks of private space companies. Indeed, although the space economy is growing overall, global government spending decreased by 1.3% between 2012 and 2013 while commercial-sector growth increased by roughly 7% (Conklin, 2017: 33). Central to the impetus behind this private sector space boom has been the emergence of the so-called ‘NewSpace’ actors – “a broad range of primarily US-based entrepreneurs… who, for more than 30 years, have aimed to commercialise space” (Valentine, 2012: 1046). Driven by a libertarian outlook of economics, and critical of NASA’s historical grip on space exploration, these individuals portray themselves as the pioneers of the ‘final frontier’ who will save humanity from extinction through privately-funded extra-terrestrial missions (Kearnes & van Dooren, 2017: 182). ¶Near-Earth Object and Lunar Resource Mining: US Private Property in Space ¶Lunar rock samples from the Apollo missions containing rare Earth resources, such as Helium-3 which produces more power and less waste than traditional nuclear reactors on Earth, have since fuelled incentives for extra-terrestrial resource mining (Brearley, 2006: 44-46). This was further facilitated by suggestions that near-earth objects (NEOs) like the so-called ‘Anteros asteroid’ could comprise of over five trillion dollars’ worth of magnesium silicate and aluminium (Kramer, 2017: 131). ¶Envisaging appropriation concerns that might arise from the future extraction of space assets by spacefaring nations, Article II of the UN OST declared that: “Outer space is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means” (UN, 1967). The emphasis on claims of national sovereignty were intimately tied to the Cold War context at the time, where space activities were under the exclusive monopoly of governmental agencies and initiated for goals of military dominance or national prestige (Sachdeva, 2017: 210). However, the privatisation of the space industry that has occurred since the 1980s has meant that the legislation leaves an enormous amount of legal ambiguity and interpretation regarding the regulation of private resource mining in space. As Shaer (2016) demonstrates, the Article II provision fails to address either the exploitation of space for financial gain or the property claims of commercial enterprises (Shaer, 2016: 47). ¶Nevertheless, Article VI of the UN OST asserts that: “States shall be responsible for national space activities whether carried out by governmental or non-governmental entities” (UN, 1967; own emphasis). Some scholars have suggested that this clause significantly restrains the activities of private space corporations by incentivising states to regulate their domestic organisations for fear of liability concerns (Abeyratne, 1998: 168). However, the US government recently enacted a piece of legislation which exploited this clause, in order to circumvent its own restrictions and strengthen US economic influence in space. The passage of the 2015 SPACE Act enabled US citizens to privately “possess, own, transport, use, and sell the resources” they obtain in outer space, whilst making careful consideration to deny national sovereign claims over such materials (Leon, 2018: 500). ¶Yet, regardless of whether it is an American private company or public venture, the US is still satisfying its geopolitical interests; by exclusively siphoning off extra-terrestrial resources for American gain, the nation’s soft power is thereby extended at the expense of spacefaring adversaries such as China (Basu & Kurlekar, 2016: 65). Indeed NewSpace actors cleverly played on these strategic concerns prior to the bill’s passage, with billionaire space entrepreneur Robert Bigelow asserting that the biggest danger wasn’t private enterprises on the Moon, but that “America is asleep and does nothing, while China comes along… surveying and laying claim [to the Moon]” (Klinger, 2017: 222). ¶The US government’s support for private space companies is also likely to lead to the reinforcement of Earth-bound wealth inequalities in space. Many NewSpace actors frame their long-term ambitions in space with strong anthropogenic undertones, by offering the salvation of the human race from impending extinction through off-world colonial developments (Kearnes & Dooren: 2017: 182). Yet, this type of discourse disguises the highly exclusive nature of these missions. Whilst they seem to suggest that there is a stake for ordinary citizens in the vast space frontier, the reality is that these self-described space pioneers are a member of a narrow ‘cosmic elite’ – “founders of Amazon.com, Microsoft, Pay Pal… and a smattering of games designers and hotel magnates” (Parker, 2009: 91). ¶Indeed, private space enterprises have themselves suggested that they have no obligation to share mineral resources extracted in space with the global community (Klinger, 2017: 208). This is reflected in the speeches of individuals such as Nathan Ingraham, a senior editor at the tech site EngadAsteroid mining, who claimed that asteroid mining was “how [America is] going to move into space and develop the next Vegas Strip” (Shaer, 2016: 50). Such comments highlight a form of what Beery (2016) defines as ‘scalar politics’. In similar ways to the ‘scaling’ of unequal international relations that has constituted our relationship with outer space under the guise of the ‘global commons’ (Beery, 2016: 99), private companies – through their anthropogenic discourse – are scaling existing Earth-bound wealth inequalities and social relations into space by siphoning off extra-terrestrial resources. By constructing their endeavours in ways that appeal to the common good, NewSpace actors are therefore concealing the reality of how commercial resource extraction serves the exclusive interests of their private shareholders at the expense of the vast majority of the global population.

#### Private control of space inevitably leads to exploitation. Spencer ‘20

Spencer, Keith A. [senior editor at Salon]“Against Mars-a-Lago: Why SpaceX's Mars Colonization Plan Should Terrify You.” Salon, Salon.com, 7 Jan. 2020, https://www.salon.com/2017/10/08/against-mars-a-lago-why-spacexs-mars-colonization-plan-should-terrify-you/.

When CEO Elon Musk announced last month that his aerospace company SpaceX would be [sending cargo missions](https://www.washingtonpost.com/news/the-switch/wp/2017/09/29/elon-musk-says-his-next-spaceship-could-not-only-take-to-you-the-moon-and-mars-but-from-n-y-to-london-in-29-minutes/?utm_term=.85279aa2076a) to Mars by 2022 — the first step in his tourism-driven colonization plan — a small cheer went up among space and science enthusiasts. Writing in the New York Post, Stephen Carter [called](http://nypost.com/2017/10/07/elon-musks-inspiring-vision-for-reaching-mars-and-the-stars/) Musk’s vision “inspiring,” a salve for politically contentious times. “Our species has turned its vision inward; our image of human possibility has grown cramped and pessimistic,” Carter wrote: "We dream less of reaching the stars than of winning the next election; less of maturing as a species than of shunning those who are different; less of the blessings of an advanced technological tomorrow than of an apocalyptic future marked by a desperate struggle to survive. Maybe a focus on the possibility of reaching our nearest planetary neighbor will help change all that." The Post editorial reflected a growing media consensus that humankind’s ultimate destiny is the colonization of the solar system — yet on a private basis. American government leaders generally agree with this vision. Obama egged on the [privatization of NASA](http://blogs.discovermagazine.com/80beats/2010/02/01/obamas-nasa-budget-so-long-moon-missions-hello-private-spaceflight/) by legislating a policy shift to private commercial spaceflight, awarding government contracts to private companies like SpaceX to shuttle supplies to the International Space Station. “Governments can develop new technology and do some of the exciting early exploration but in the long run it's the private sector that finds ways to make profit, finds ways to expand humanity,” [said](http://www.theregister.co.uk/2012/03/08/nasa_private_space_nasa/) Dr. S. Pete Worden, the director of the NASA Ames Research lab, in 2012. And in a Wall Street Journal [op-ed](https://www.wsj.com/articles/america-will-return-to-the-moonand-go-beyond-1507158341?mod=e2fb) this week, Vice President Mike Pence wrote of his ambitions to bring [American-style capitalism to the stars](https://www.salon.com/2017/08/06/tacoma-the-next-video-game-from-gone-home-creators-imagines-the-gig-economy-in-space/): “In the years to come, American industry must be the first to maintain a constant commercial human presence in low-Earth orbit, to expand the sphere of the economy beyond this blue marble,” Pence wrote. One wonders if these luminaries know their history. There has be no instance in which a private corporation became a colonizing power that did not end badly for everyone besides the shareholders. The East India Company is perhaps the finest portent of Musk’s Martian ambitions. In 1765, the East India Company forced the Mughal emperor to sign a legal agreement that would essentially permit their company to become the de facto rulers of Bengal. The East India Company then collected taxes and used its private army, which was over 200,000 strong by the early 19th century, to repress those who got in the way of its profit margins. “It was not the British government that seized India at the end of the 18th century, but a dangerously unregulated private company headquartered in one small office, five windows wide, in London, and managed in India by an unstable sociopath,” [writes](https://www.theguardian.com/world/2015/mar/04/east-india-company-original-corporate-raiders) William Dalrymple in the Guardian. “It almost certainly remains the supreme act of corporate violence in world history.” The East India Company came to colonize much of the Indian subcontinent. In the modern era, an era in which the right of corporations to do what they want, unencumbered, has become a [sacrosanct](https://www.salon.com/2017/09/19/trumps-interior-secretary-on-national-monuments-sell-em-and-strip-em/) [right](https://www.salon.com/2016/12/15/exxonmobil-ceo-and-trump-pick-rex-tillerson-my-philosophy-is-to-make-money_partner/) in the eyes of many politicians, the lessons of the East India Company seem to have been all but forgotten. As Dalrymple writes: Democracy as we know it was considered an advance over feudalism because of the power that it gave the commoners to share in collective governance. To privately colonize a nation, much less a planet, means ceding governance and control back to corporations whose interest is not ours, and indeed, is always at odds with workers and residents — particularly in a resource-limited environment like a spaceship or the red planet. Even if, as Musk suggests, a private foundation is [put in charge](https://www.jacobinmag.com/2017/02/mars-elon-musk-space-exploration-nasa-colonization) of running the show on Mars, their interests will inherently be at [odds with the workers](http://www.dailykos.com/story/2015/5/5/1372730/-Skylab-and-the-Sit-Down-Strike-in-Space) and employees involved. After all, a private foundation [is not a democracy](https://www.jacobinmag.com/2015/11/philanthropy-charity-banga-carnegie-gates-foundation-development); and as major philanthropic organizations like the Bill and Melinda Gates Foundation [illustrate](https://www.jacobinmag.com/2015/11/philanthropy-charity-banga-carnegie-gates-foundation-development), often [do the bidding](http://www.peterfrase.com/2011/08/the-decay-of-the-capitalist-class/) of their rich donors, and take an [important role in ripening industries](https://www.salon.com/2016/02/21/corporate_reformers_wreck_public_schools_billionaire_foundations_and_wall_street_financiers_are_not_out_to_help_your_kids_learn/) and regions for exploitation by Western corporations. Yet Mars’ colonization is a bit different than Bengal, namely in that it is not merely underdeveloped; it is undeveloped. How do you start an entirely new economy on a virgin world with no industry? After all, Martian resource extraction and trade with Earth is not feasible; the cost of transporting material across the solar system is astronomical, and there are no obvious minerals on Mars that we don’t already have in abundance on Earth. The only basis for colonization of Mars that Musk can conceive of is one based on tourism: the rich pay an amount — Musk quotes the ticket price at [$200,000 if he can get 1 million tourists](https://www.recode.net/2016/9/27/13081488/elon-musk-spacex-mars-colony-space-travel-funding-rocket-nasa) to pay that — that entitles them to a round-trip ticket. And while they’re on Mars and traveling to it, they luxuriate: Musk has [assured](http://www.telegraph.co.uk/science/2017/06/21/elon-musk-create-city-mars-million-inhabitants/) that the trip would be “fun.” This is what makes Musk’s Mars vision so different than, say, the Apollo missions or the International Space Station. This isn’t really exploration for humanity’s sake — there’s not that much science assumed here, as there was in the Moon missions. Musk wants to build the ultimate luxury package, exclusively for the richest among us. Musk isn’t trying to build something akin to Matt Damon’s spartan research base in "The Martian." He wants to build Mars-a-Lago. And an economy based on tourism, particularly high-end tourism, needs employees — even if a high degree of automation is assumed. And as I’ve written about [before](https://www.jacobinmag.com/2017/02/mars-elon-musk-space-exploration-nasa-colonization), that means a lot of labor at the lowest cost possible. Imagine signing away years of your life to be a housekeeper in the Mars-a-Lago hotel, with your communications, water, food, energy usage, even oxygen tightly managed by your employer, and no government to file a grievance to if your employer cuts your wages, harasses you, cuts off your oxygen. Where would Mars-a-Lago's employees turn if their rights were impinged upon? Oh wait, this planet is run privately? You have no rights. Musk's vision for Mars colonization is inherently authoritarian. The potential for the existence of the employees of the Martian tourism industry to slip into something resembling indentured servitude, even slavery, cannot be underestimated. We have government regulations for a reason on Earth — to protect us from the fresh horror Musk hopes to export to Mars. If he's considered these questions, he doesn't seem to care; for Musk, the devil's in the technological and financial details. The social and political are pretty uninteresting to him. This is unsurprising; accounts from those who have worked closely with him hint that he, like many CEOs, [may be a sociopath](http://www.businessinsider.com/working-with-elon-musk-tesla-2015-5). Even as a space enthusiast, I cannot get excited about the private colonization of Mars. You shouldn’t be either. This is not a giant leap for mankind; this is the next great leap in plutocracy. The mere notion that global wealth is so unevenly distributed that a small but sufficient sum of rich people could afford this trip is unsettling, indicative of the era of astonishing economic inequality in which we suffer. Thomas Frank, writing in Harpers, once [wrote of](https://harpers.org/archive/2011/11/the-bleakness-stakes/) a popular t-shirt he sighted while picnicking in a small West Virginia coal town: “Mine it union or keep it in the ground.” The idea, of course, is that the corporations interested in resource extraction do not care whatsoever about their workers’ health, safety, or well-being; the union had their interests at heart, and was able to negotiate for safety, job security, and so on. I’d like to see a similar t-shirt or bumper sticker emerge among scientists and space enthusiasts: “Explore Mars democratically, or keep it in the sky.”

#### Space resources must be distributed democratically—this requires challenging private control of outer space

Levine 15

Nick Levine, MPhil candidate in history of science at the University of Cambridge, 3-21-2015, "Democratize the Universe," Jacobin, <https://jacobinmag.com/2015/03/space-industry-extraction-levine>

The privatization of the Milky Way has begun. Last summer, the bipartisan ASTEROIDS Act was introduced in Congress. The legislation’s aim is to grant US corporations property rights over any natural resources — like the platinum-group metals used in electronics — that they extract from asteroids. The bill took advantage of an ambiguity in the United Nations’ 1967 Outer Space Treaty. That agreement forbade nations and private organizations from claiming territory on celestial bodies, but was unclear about whether the exploitation of their natural resources would be allowed, and if so, on what terms. The legal framework governing the economic development of outer space will have enormous effects on the distribution of wealth and income in the Milky Way and beyond. We could fight for a galactic democracy, where the proceeds of the space economy are distributed widely. Or we could accept the trickle-down astronomics anticipated by the ASTEROIDS Act, which would allow for the concentration of vast amounts of economic and political power in the hands of a few corporations and the most technologically developed nations. Given the pressing problems of inequality and climate change on Earth, the US left has been understandably uninterested in or largely dismissive of any space pursuits. For this reason, it remains unprepared to organize around extraterrestrial economic justice. The Left’s rejection of space has effectively ceded the celestial commons to the business interests who would literally universalize laissez-faire. Organizing around extraterrestrial politics wasn’t always treated as an escapist distraction. In the 1970s, fighting for a celestial commons was a pillar of developing countries’ struggle to create a more equitable economic order. Starting in the 1960s, a coalition of underdeveloped nations, many recently decolonized, asserted their strength in numbers in the United Nations by forming a caucus known as the Group of 77. In the early 1970s, this bloc announced its intention to establish a “new international economic order,” which found its expression in a series of UN treaties governing international regions, like sea beds and outer space, that they hoped would spread the economic benefits of the commons more equitably, with special attention to less developed nations. For these countries — as well as for the nervous US business interests that opposed them — their plan to “socialize the moon,” as some put it at the time, was the first step toward a more egalitarian distribution of wealth and power in human society. It will be years before the industrialization of outer space is economically viable, if it ever is. But the legal framework that would shape that transition is being worked out now. The ASTEROIDS Act was submitted on behalf of those who would benefit most from a laissez-faire extraterrestrial system. If we leave the discussion about celestial property rights to the business interests that monopolize it now, any dream of economic democracy in outer space will go the way of jetpacks, flying cars, and the fifteen-hour workweek. As Below, So Above Left critics of space proposals make the same mistakes as the most techno-utopian starry-eyed industrialists. From the point of view of the latter, celestial development will provide ultimate salvation to the human race by making us a multi-planetary species; the former see outer space as an infinite void essentially antagonistic to human life, interest in which is only orchestrated for cynical political ends. Each side misconceives extraterrestrial pursuits as qualitatively different from economic activities on Earth. Venturing into space may be a greater technical challenge; it may cost more, be more dangerous, or be a mistaken use of resources. But to understand these prospects in existential terms rather than as a new episode in the familiar history of industrial development and resource extraction — with all the political-strategic dangers and organizing opportunities that come with them — is to be blinded by the space romanticism that is a peculiar vestige of Cold War geopolitics. Whether and how we should go to space are not profound philosophical questions, at least not primarily. What’s at stake is not just the “stature of man,” as Hannah Arendt put it, but a political-economic struggle over the future of the celestial commons, which could result in a dramatic intensification of inequality — or a small step for humankind toward a more egalitarian state of affairs on our current planet. Undoubtedly, there are good reasons to be skeptical about going to space. Some have argued that it shifts attention away from solving the difficult problems of economic and environmental justice on Earth — think of Gil Scott-Heron’s spoken-word poem “Whitey on the Moon,” which juxtaposes the deprivation of the American underclass with the vast resources diverted to space. Scott-Heron’s critique is powerful, but it’s important to remember that he was denouncing an unjust economic system. He wasn’t issuing a timeless condemnation of space pursuits as such. Whether the aims of providing for all and developing outer space are mutually exclusive depends on the political forces on the ground. We might also question whether mining asteroids would be detrimental to our current planet’s environment in the medium term. If we don’t find a renewable way to blast off into outer space, the exploitation of these resources could lead to an intensification of, not a move away from, the fossil-fuel economy. If the environmental impact of space mining turns out to be large, it would be analogous to fracking — a technological development that gives us access to new resources, but with devastating ecological side effects — and ought to be opposed on similar grounds. On the other hand, some speculate that mining the Moon’s Helium-3 reserves, for example, could provide an abundant source of clean energy. The terrestrial environmental impact of space activity remains an open question that must be explored before we stake our hopes on the economic development of outer space. Philosophers have suggested that we might have ethical duties to preserve the “natural” states of celestial bodies. Others fear that our activities might unknowingly wipe out alien microbial life. We should remain sensitive to the aesthetic and cultural value of outer space, as well as the potential for extinction and the exhaustion of resources misleadingly proclaimed to be limitless. But if the Left rejects space on these grounds we abandon its fate to the will of private interests. These concerns shouldn’t cause us to write off space altogether — rather, they should motivate us even more to fight for the careful, democratic use of celestial resources for the benefit of all. There is also reason to be cautiously optimistic about extending economic activity to outer space. For one, the resources there — whether platinum-group metals useful in electronics, or fuels that could be central to the semi-independent functioning of an outer space economy — have the potential to raise our standards of living. Imagine, a superabundance of asteroid metals that are scarce on Earth, like platinum, driving the sort of automation that could expand output and reduce the need to work. Of course, there’s nothing inevitable about the benefits of productivity gains being distributed widely, as we’ve seen in the United States over the past forty years. This is a problem not limited to space, and the myth of the “final frontier” must not distract us from the already existing problems of wealth and income distribution on Earth. While the industrialization of the solar system isn’t a panacea for all economic ills, it does offer a significant organizing opportunity, since it will force a confrontation over the future of the vast celestial commons. The democratic possibilities of such a struggle have been recognized before: one conservative American citizens’ group in the 1970s called a progressive UN space treaty a “vital component of Third World demands for massive redistribution of wealth so as ultimately to equate the economic positions of the two hemispheres.” Many in the 1970s identified the egalitarian potential in the development of outer space, and the Left must not overlook it today. Back to the Future One of the Group of 77’s major goals was to apply some of the redistributive functions of the welfare state on a global scale. In 1974, that coalition issued a “Declaration on the Establishment of a New International Economic Order,” which called for a fairer system of global trade and resource distribution, one that could alleviate historical inequality. One of the battlegrounds for the Group of 77 was the negotiation over extraterrestrial property rights. The Outer Space Treaty of 1967, signed by over ninety countries in the heat of the first sprint to the moon, rejected the notion that celestial bodies fell under the legal principle of res nullius — meaning that outer space was empty territory that could be claimed for a nation through occupation. It forbade the “national appropriation by claim of sovereignty, by means of use or occupation, or by any other means” of outer space. But the treaty was not just restrictive. It also had a positive requirement for extraterrestrial conduct: “The exploration and use of outer space,” it declared, “shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.” However, nobody knew what this would mean in practice: was it a call for egalitarian economics, or an empty proclamation of liberal benevolence? Complicating matters, it was unclear whether the extraction and sale of natural resources from outer space fell under the category of “appropriation,” which had been forbidden. And what exactly was this benefit to all countries that our outer space pursuits were supposed to bring? How would its distribution be enforced? Which interpretation would win out was more a question of political power than of esoteric legal maneuvers. The Group of 77 took an activist approach to these issues, proposing amendments to the Outer Space Treaty regime that would spread the economic benefits of the celestial commons to less developed countries that did not have the resources to get to space, let alone mine it. Thus in 1970, the Argentine delegate to the UN Committee on the Peaceful Uses of Outer Space proposed to legally designate outer space and its resources “the common heritage of mankind.” First applied in negotiations over maritime law a few years earlier, the “common heritage” concept was intended to give legal grounding to the peaceful international governance of the commons. As an alternative to the laissez-faire approach advocated by many private interests, the “common heritage” principle also provided a legal framework for the democratic distribution of revenues derived from the international commons. In 1973, the Indian delegation to the Committee on the Peaceful Uses of Outer Space tried to put this idea into celestial practice, proposing an amendment to the Outer Space Treaty that called for equitable sharing of space benefits, particularly with developing countries. The Brazilian delegate to the committee summarized the group’s position: “It does not seem justifiable . . . that space activities . . . should evolve in a climate of total laissez-faire, which would conceal under the cloak of rationality new ways for an abusive exercise of power by those who exert control over technology.” Despite opposition from both the Soviet Union and the United States, the final draft of this new outer space agreement included a version of the “common heritage of mankind” doctrine. When the finalized treaty was brought to the US in 1979 for ratification, business groups balked. The vision of egalitarian galactic democracy suggested by the document was rightly seen as contrary to narrow American interests. The United Technologies Corp­oration, a designer and manufacturer of aircrafts and other heavy machinery (including the Black Hawk helicopter) took out a large advertisement in the Washington Post and a number of other newspapers, warning that the treaty would establish an “OPEC-like monopoly, require mandatory transfer of technology, and impose high international taxes on profits as a way of shifting wealth from the developed to the less developed countries.” The president of the corporation, Alexander Haig, also testified against the treaty in Congress in 1979, warning that “the common heritage concept expressed in the treaty underlies Third World efforts directed at a fundamental redistribution of global wealth.” Haig was hired as Ronald Reagan’s secretary of state in 1981, and political opposition to the bill forced NASA’s chief counsel to abandon defense of the treaty. In the end, the Moon Treaty, as the 1979 document came to be known, failed to gain more than a few signatories, leaving open the question of how the benefits of outer space were to be shared. In 1988, a different coalition of developing countries added the question of space benefits to the UN outer space committee’s agenda. But they failed to gain traction, and by 1993 they had to concede, as two long-time delegates to the outer space committee put it, that “their attempt [at] a redistributive revolution in international space cooperation had failed.” The conversation had shifted from the distribution of economic benefits to a narrower emphasis on international scientific coordination and development aid. This retreat culminated in a 1996 declaration that limited the interpretation of the “benefit” clause of the Outer Space Treaty to vague promises to help less developed countries improve their space technologies. The ultimate failure of the Moon Treaty was representative of broader developments in international politics, as the influence of the Group of 77 declined. The fact that the structural adjustment policies of the Washington Consensus won out over the Third World’s redistributive goals was the result of contingent factors — the oil shock’s exacerbation of debt crises, for instance — but it also indicated the limits of the power the Group of 77 had wielded in the first place. In October 2014, the UN outer space committee issued a press release summarizing its most recent session. Its headline: “Outer Space Benefits Must Not Be Allowed to Widen Global Gap between Economic, Social Inequality, Fourth Committee Told.” Despite paying lip service to its past concerns, the outer space committee now emphasizes equal access, voluntary technology transfers, and modest development aid over the direct redistributive approach it took in the 1970s. This shift from struggling for equality of outcome to equality of opportunity, with no accountability mechanism in place to ensure even the latter, represents a striking regression. The egalitarian dreams of the “revolution of the colonized” in the UN, as it was called at the time, have been forgotten. The Empire Strikes Back Recent US plans for outer space development, shaped overwhelmingly by Silicon Valley’s intuitions and capital, stand in stark contrast to the futuristic democratic dreams of the Group of 77. The most prominent of these entrepreneurial visions has been Elon Musk’s plan to colonize Mars. For now, international law seems to unequivocally forbid territorial claims on Mars and other celestial bodies. The legal status of resource extraction, on the other hand, remains an open question. A vocal group of entrepreneurs is hoping to set a precedent for the private appropriation of natural resources from asteroids, without internationally redistributive obligations. Planetary Resources, an asteroid-mining company whose backers include Larry Page, Eric Schmidt, and James Cameron, plans to launch satellites to prospect for valuable asteroids in the next two years. Another US firm, Deep Space Industries, will launch exploratory satellites as soon as next year. These entrepreneurs hope to extract the valuable platinum-group metals, essential for manufacturing electronics, that are rare on Earth. Sensationalist articles on space mining will tell you about an asteroid worth $20 trillion. Investors also believe that asteroids might provide water that could be broken down into oxygen and hydrogen in space, yielding air for astronauts and fuel for their ships. This could facilitate a dramatic acceleration in the economic development of outer space. The CEO of Deep Space Industries said he hopes asteroids near Earth will be “like the Iron Range of Minnesota was for the Detroit car industry last century — a key resource located near where it was needed. In this case, metals and fuel from asteroids can expand the in-space industries of this century. That is our strategy.” Another entrepreneur called the industrialization of outer space the “biggest wealth-creation opportunity in modern history.” Before this value can be generated, however, the legal wrinkles have to be ironed out. And so in the summer of 2014, the ASTEROIDS Act was introduced in the House of Representatives to “promote the right of United States commercial entities to explore and utilize resources from asteroids in outer space, in accordance with the existing international obligations of the United States, free from harmful interference, and to transfer or sell such resources.” The legislation was intended to clarify US interpretations of international space law, explicitly granting American companies the right to extract asteroid resources and bring them to market. The conclusion of Congress’s last session means that the bill will have to be reintroduced for it to move forward, and it is uncertain exactly when and how this will happen. But its appearance marked another clear attempt to unilaterally push international norms toward the free extraction of outer space resources, with limited democratic responsibilities attached — and it will not be the last. Joanne Gabrynowicz, editor emerita of the Journal of Space Law, said that an adviser to Planetary Resources had drafted the bill. Deep Space Industries also sent a letter supporting it directly to the space subcommittee of the House of Representatives. Moreover, Congressman Bill Posey, a cosponsor of the act, represents Florida, a state that Gabrynowicz pointed out has recently been forced to try to attract commercial space business — a direct response to the economic hardship caused by the decommissioning NASA’s space shuttle program. Such extraterrestrial special interests will no doubt continue to exert legislative pressure. In addition to asteroids, companies are investing millions in mining the moon, despite legal uncertainties. One such company, Moon Express, has already received a $10 million data-sharing contract from NASA. One of that company’s founders, a former dot-com billionaire, told the Los Angeles Times: There is strong legal precedent and consensus of “finders, keepers” for resources that are liberated through private investment, and the same will be true on the moon. You don’t have to own land to have ownership of resources you unlock from it. Moon Express will use existing precedents of peaceful presence and exploration set by the US government forty years ago. This redeployment of the finders-keepers principle is anathema to the redistributive regime imagined by the Group of 77. Private companies like Planetary Resources and Moon Express, with support from the federal government, are betting not only on the viability of space industrialization, but also on their ability to push through a legal regime that will validate their property claims on their terms. But the universalization of laissez-faire is not inevitable. Final Frontier Thesis The history of the Moon Treaty serves as a reminder that outer space is not just a screen onto which we project techno-utopian fantasies or existential anxieties about the infinite void. It has been, and will continue to be, a site of concrete struggle over economic power. The politics of the present are undoubtedly different from those of the 1970s. The egalitarian project of the Group of 77 has given way to BRICS-style market liberalism. Global capital has gained power where international labor efforts have stagnated. Domestic inequalities have skyrocketed. The rapid proliferation of information technologies has temporarily masked the reality that the future, to paraphrase William Gibson, is not being very evenly distributed. Without international political organization to challenge galactic market fundamentalism, a twenty-first century space odyssey could mean the concentration of even more wealth and income in the hands of a few powerful corporations and the most technologically advanced countries. At the same time, and for the same reasons, the prospect of preserving the final frontier as a celestial commons presents an opportunity to fight for a more democratic political economy. Sharing the benefits of the celestial commons is key to expanding democracy to a galactic scale. One time-tested means of distributing the benefits of natural-resource extraction universally is the sovereign wealth fund, which Alaska uses to deliver oil revenue to its residents. As an international commons, outer space offers an opportunity to experiment with such redistributive mechanisms beyond the traditional confines of the nation-state. Organizing around an issue of such scale may seem utopian, but it’s also necessary. From regulating capital to mitigating climate change, the problems that confront us are inherently global in scope and require commensurate strategies. At the very least, the global left ought to demand the creation of an independent Galactic Wealth Fund to manage the proceeds of outer space resources on behalf of all human beings. At first, it would amount to little, divided up among all of us. But as the space economy grows relative to the terrestrial one, social dividends from the Galactic Wealth Fund could provide the basis for a truly universal basic income. This is just one component of a broader platform for galactic democracy that must be developed collectively. Extraterrestrial economic justice — not just shiny technological advances — will be central to any truly egalitarian politics in the twenty-first century. It’s time to start building a democratic futurism.

### Solvency

#### Plan text: Outer space ought to be recognized as a global commons as per the Goehring card. Goehring describes but does not advocate treating space in this way.

Goehring 6/3 - John S. Goehring [B.A., University of California, Berkeley; J.D., Tulane Law School; LL.M., McGill University, Institute of Air and Space Law) is a space and international law attorney for the Department of Defense and a judge advocate in the United States Air Force Reserve], “Why Isn’t Outer Space a Global Commons?” *Journal of National Security Law and Policy*. Vol. 11:573. (June 3, 2021).<https://jnslp.com/wp-content/uploads/2021/09/Why\_Isnt\_Outer\_Space\_a\_Global\_Commons\_2.pdf> AT

B. Global Commons as a Constraining Concept In an economic context, as opposed to a military or geopolitical context, “global commons” is typically used to convey a constraining concept. The concept of a “commons” may be thought of as constraining because it is often associated with notions of shared ownership, public governance, or limitations on use. Whether these constraints are viewed positively or negatively is a subjective assessment. The constraining concept is more complicated than the enabling concept because it can reflect two distinct meanings. This is likely a function of its history. “The ‘commons,’ of course, has a long historical and intellectual lineage ranging from the enclosure movement in England, to Garret Hardin’s famous Tragedy of the Commons parable, to Elinor Ostrom’s Nobel-prize winning work on governing common pool resources,” observe Professors Foster and Iaione.30 Applying rational-choice theory, Hardin postulated that individual actors “automatically tend to over-exploit and plunder common-pool resources that are freely available to everyone.”31 The only possible solution to this dilemma, according to Hardin, was “the enclosure of resources through private property, or, failing that, public regulation.”32 Ostrom’s work later “turned [Hardin’s] conventional wisdom upside down: complex socio-ecological systems (in which goods are extractable and beneficiaries are hard to exclude) can prove to be sustainable resource domains granted that its stakeholders adopt a polycentric and self-regulated mode of governance.”33 As this brief summary suggests, one meaning of “commons” is simply to describe a category of goods.34 This usage was typical prior to Ostrom’s influence.35 In this meaning, a common is a resource to which access is shared, such as an open hunting ground. Some common resources may offer more than one type of benefit. For example, a hunting ground may offer open space for recreation, game to hunt, and trees for building. Some common resources may be subtractable, meaning that use of the resource subtracts from the ability of others to use the resource, while others remain plentiful. Describing a resource in this manner, as a common resource, does not necessarily imply any particular property regime or use limitations.36 A common hunting ground, for instance, may be publicly owned or privately owned. Ostrom helped popularize the term “common pool resource” to describe this general category of resources.37 As Dr. Tepper argues, “[i]t is crucial to differentiate between resources and the legal regime that governs them.”38 This is because the term “global commons” – or simply “commons” – can also be used in an economic sense to refer to a form of collective ownership and governance rather than to the economic goods themselves.39 As Professors Cogolati and Woulters observe, “[u]nder Ostrom’s influence, the commons have become more closely connected with the collective self-governance and participatory mechanisms they imply, than with the strict category of (rivalrous and non-excludable) economic goods they used to refer to.”40 This may account for the notion held by some that “the commons is less a description of the resource and its characteristics and more of a normative claim to the resource” (emphasis original).41 Used in this way, a commons is a category of property rights based on collective ownership.42 Put simply, “commons” is sometimes used to refer to common property, meaning a resource with more than one owner, and which therefore should be governed collectively. This notion of a commons is sometimes associated with the common heritage of mankind concept, particularly in the context of outer space. As expressed in Article 11(3) of the 1979 Moon Agreement, the common heritage of mankind concept creates a new type of territorial status in which the moon and celestial bodies “are not only in themselves not subject to national appropriation in a territorial sense, but the fruits and resources of which are also deemed to be the property of mankind at large,” according to Professor Cheng.43 This principle, as characterized by Professor Christol, not only “protects the proposition what [sic] given areas and their resources are open to inclusive use and that there may not be exclusive use,” but also “goes farther: it asserts that there must be a sharing of the benefits and of the values derived from the indicated commons.”44 In other words, status as the common heritage of mankind does not permit full private property rights in space resources. It should be noted that the concept of the common heritage of mankind is not limited to the outer space domain. In 1970, the United Nations (UN) General Assembly passed a non-binding resolution declaring “[t]he sea-bed and ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction (hereinafter referred to as the area), as well as the resources of the area, are the common heritage of mankind.”45 Years later – after the completion of the Moon Agreement – this principle was codified in Article 136 of the 1982 UN Convention on the Law of the Sea (UNCLOS).46 Importantly, while the area is the common heritage of mankind according to the Convention, the high seas above the area remains free.47 Hence, some may refer to the high seas as a global commons (in the enabling sense), while others may refer to the deep sea bed as a global commons (in the constraining sense) – a clear example of why the term is fraught with misunderstanding. While the concept of common heritage of the seabed and of the Moon and other celestial bodies are linked, the Moon Agreement declares that the content of the common heritage of mankind concept as it applies to States Parties “finds its expression in the provisions of this Agreement” and nowhere else.48 In general, the concept “lacks a precise definition” but “basically wishes to convey the idea that management, exploitation and distribution of the natural resources of the area in question are matters to be decided upon by the international community and are not to be left to the initiative and discretion of individual States and their nationals.”49 The United States has not signed the Moon Agreement and rejects the notion that outer space resources are the common heritage of mankind, a position clearly reiterated in Executive Order 13914.50 The last of the five international space treaties to have been negotiated in the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), the Moon Agreement is regarded as a failed treaty with only 18 nations having signed on, none of which is China, Russia, or the United States, the three most prominent space-faring States.51 VISITED STATUS OF INTERNATIONAL AGREEMENTS RELATING TO ACTIVITIES IN OUTER SPACE, UNITED NATIONS OFFICE FOR OUTER SPACE AFFAIRS, https://perma.cc/8VA5-4UW8 (last July 11, 2020). The 1967 Outer Space Treaty, by contrast, has over 100 States Parties.52 Context is essential for discerning the distinction between the constraining concept and the enabling concept. By themselves, “global commons” or “commons” do not necessarily convey one concept or the other. Describing a resource as a “global commons” in an economic context implies a focus on an open access resource and the consumption of that resource; it suggests a resource allocation problem in need of a solution and inevitably invites questions about ownership. In contrast, referring to a global commons in a military or geopolitical context implies a focus on the use of an open access domain and, when used accurately, the lack of ownership is a settled question. Indeed, the distinction between a focus on a thing (res) itself and a focus on the right to use and explore a domain is among the reasons the term “res communis” is not interchangeable with “global commons” when used in a military or geopolitical sense.53

#### Treating space as a commons solves orbital debris. States already agree to a limited regime of this type.

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The failure to manage Earth orbits as a commons undermines safety and predictability, exposing space operators to growing risks such as collisions with other satellites and debris. The long-standing debris problem has been building for decades and demands an international solution.¶ Competing states need to coalesce behind a commons-based understanding of Earth orbits to set the table for a governance system to organize space traffic and address rampant debris. New leadership in the United States can spur progress on space governance by affirming that Earth orbits are a great commons. So far, President Joe Biden and his administration have focused on major space projects, but a relatively simple policy declaration that frames Earth orbits as a great commons can support efforts to negotiate space governance models for issues like debris mitigation and remediation. The Biden administration can set the stage to pursue broad space policy goals by establishing a consensus among states, particularly those with the most invested in Earth orbits, that space is a great commons.¶ THE PRESSING NEED FOR SPACE GOVERNANCE¶ The Earth orbits that provide the majority of benefits to states and commercial ventures represent only a tiny fraction of outer space as a whole. Competition for the limited volume of these Earth orbits is especially fierce since two satellites cannot be in the same place at the same time and not all orbits are equally useful for all missions. The number of objects residing in Earth orbits is now at an all-time high, with most new objects introduced into orbits at altitudes of between 400 and 700 kilometers above sea level. Millions of pieces of debris in Earth orbits pose a threat to continuing space operations. For instance, the final U.S. space shuttle missions faced 1-in-300 odds of losing a space vehicle or crew member to orbital debris or micrometeoroid impacts.¶ Collisions with fragments of orbital litter as small as a few millimeters across can ruin satellites and end missions. Current technologies cannot track all of these tiny pieces of debris, leaving space assets at the mercy of undetectable, untraceable, and unpredictable pieces of space junk. Some researchers have determined that the debris population in low Earth orbit is already self-sustaining, meaning that collisions between space objects will produce debris more rapidly than natural forces, like atmospheric drag, can remove it from orbit.¶ States—namely the United States, Russia, China, and India—have exacerbated this debris accumulation trend by testing kinetic anti-satellite capabilities or otherwise purposefully fragmenting their satellites in orbit. These states, along with the rest of the multilateral disarmament community, are currently at an impasse on establishing future space governance mechanisms that can address the debris issue. A portion of this impasse may be attributable to disparate views of the nature of outer space in the international context. Establishing a clear view among negotiating parties that Earth orbits should be treated as a great commons would establish a basis for future agreements that reduce debris-related risks.¶ Beyond debris-generating, kinetic anti-satellite weapons tests, revolutionary operating concepts challenge existing space traffic management practices. For instance, commercial ventures are planning networks of thousands of satellites to provide low-latency connectivity on Earth and deploying them by the dozens. States are following this trend. Some are considering transitioning away from using single (or few) exquisite assets in higher orbits and toward using many satellites in low Earth orbits. These new operational concepts could lead to an increase in collision risks.¶ Without new governance agreements, problems related to debris, heavy orbital traffic, and harmful interference will only intensify. Debris in higher orbits can persist for a century or more. The costs of adapting to increasingly polluted orbits would be immense, and the opportunity costs would be even higher. For instance, all else being equal, hardening satellites against collisions increases their mass and volume, in turn raising launch costs per satellite. These costs, rooted in a failure to govern space as a commons, will be borne by all space actors, including emerging states and commercial entities.¶ EXISTING FORMS OF SPACE GOVERNANCE¶ A well-designed governance system, founded on a widespread understanding of Earth orbits as a great commons, could temper these risks. Currently, space is not wholly unregulated, but existing regulations are limited both in scope and implementation. Many operators pledge to follow national regulations and international guidelines, but decentralized accountability mechanisms limit enforcement. These guidelines also do not cover the full range of potentially risky behaviors in space. For example, while some space operators can maneuver satellites to avoid collisions, there are no compulsory rules or standards on who has the right of way.¶ At the interstate level, seminal multilateral agreements provide some more narrow guidance on what is and is not acceptable in space. Most famously, the Outer Space Treaty affirms that outer space “shall be free for exploration and use by all states without discrimination of any kind” and that “there shall be free access to all areas of celestial bodies.” Similar concepts of Earth orbits being a great commons arise in subsequent international texts. Agreements like the Liability Convention impose fault-based liability for debris-related collisions in space, but it is difficult to prove fault in this regime in part because satellite owners and operators have yet to codify a standard of care in space, and thus the regime does not clearly disincentivize debris creation in orbit. Other rules of behavior in Earth orbits have been more successful in reducing harmful interference between satellite operations, but even these efforts are limited in scope.¶ States have acceded to supranational regulations of the most limited (and thus most valuable) Earth orbits. The International Telecommunication Union (ITU) coordinates, but does not authorize, satellite deployments and operations in geosynchronous orbits and manages radiofrequency spectrum assignments in other regions of space to reduce interference between satellites. These coordination activities are underpinned by the ITU’s constitution, which reminds states “that radio frequencies and any associate orbits . . . are limited natural resources,” indicating a commons-based approach to governing the radiofrequency spectrum. However, the union’s processes are still adapting to new operational realities in low Earth orbit, and these rules were never designed to address issues like debris.

#### States can extend existing models to govern space, but recognition of space as a commons is key.

Silverstein & Panda ‘3/9 - Benjamin Silverstein [research analyst for the Space Project at the Carnegie Endowment for International Peace. MA, International Relations, Syracuse University Maxwell School of Citizenship and Public Affairs BA, International Affairs, George Washington University] and Ankit Panda [Stanton Senior Fellow in the Nuclear Policy Program at the Carnegie Endowment for International Peace. AB, Princeton University], “Space Is a Great Commons. It’s Time to Treat It as Such.” *Carnegie Endowment for International Peace* (Web). March 9, 2021. Accessed Dec. 13, 2021. <<https://carnegieendowment.org/2021/03/09/space-is-great-commons.-it-s-time-to-treat-it-as-such-pub-84018>> AT

BUILDING ON PRIOR MODELS FOR MANAGING COMMONS¶ The histories of other great commons provide lessons on how to manage shared space resources meaningfully and effectively. Efforts to minimize damage to other great commons—like the Convention on Long-Range Transboundary Air Pollution and subsequent protocols—offer guidance on how to resolve compliance issues. Notably, the negotiations on the original convention on air pollution involved, among others, the United States and the Soviet Union. This suggests that states can pursue mutual benefits in areas considered great commons even under competitive conditions. More recent negotiations on the convention’s accompanying protocols show that these competing states can even agree on financing a monitoring regime to support progress.¶ Existing conventions and implementing agreements indicate that states can reach valuable commitments to manage the Earth’s great commons. These governance models protect state interests and preserve the commons themselves. These principles apply to space, but progress on establishing more encompassing space governance principles, enforcement mechanisms, and dispute resolution procedures hinges on states sharing the fundamental view that space is a great commons. Reaching such a consensus is an important first step.¶ New leadership in prominent spacefaring states can revitalize efforts to recognize space as a commons and can build on established legal standards to pursue commons-related principles for governing Earth orbits. Space actors do not have to resolve all their competing interests based on the debris problem. But negligence, mismanagement, or poorly designed rules may spell disaster for Earth orbits. As a more diverse range of actors with space-based interests emerges, no single actor will be able to unilaterally impose universal rules. States can, however, negotiate agreements to manage commons areas to better pursue national objectives. The only way to effectively govern state and commercial space activities is to settle on and abide by common norms or rules.¶ New conventions or regulatory mechanisms for governing Earth orbits will not appear overnight, but states can build toward these goals by clarifying their commitments to treat space as a commons and pursuing governance arrangements that reflect this commitment. New policies in the United States should reflect that Earth orbits are a great commons.

#### Treating space as a commons is key to ethical exploration and human survival.

Fisk N.D. - L. A. Fisk [President of the Committee on Space Research, chartered by the International Council for Scientific Unions], “Space as a Global Commons,” UNOOSA (Web). ND. Accessed Dec. 13, 2021. <https://www.unoosa.org/documents/pdf/hlf/1st\_hlf\_Dubai/Presentations/26.pdf> AT

There is an urgency to consider and act on this issue. • With each passing year, our technological civilization becomes increasingly dependent on the satellites in orbit. • The primal threats to our civilization – global climate change and space weather – can only be understood, and dealt with by using the global perspective of observations from space. • We need to recognize also that we are extending the human presence, whether through robotic spacecraft or eventually with humans, throughout our solar system. And we have a commitment as a civilization to behave responsibility in this endeavor. To protect the environments we will explore, and to protect ourselves against any contamination of our planet that results from this exploration.

Space as a Global Commons It follows therefore that, given the centrality of space for the future of our civilization, we need to have policies and practices in place, which are shared by all spacefaring nations, that will allow and encourage each and every nation that desires to and has the capability to use and to explore space for peaceful purposes, to do so. We thus need to recognize, encourage, and enable space as a global commons. A ‘commons’ in the English language is a piece of land owned by and used by all members of a community, as in a pasture used by all residents of a village. Many nations of the world view space as a global commons, a resource not owned by any one nation but crucial to the future of all humankind.

### Underview

#### Scholarly discourse and engagement with politics is key to effective structural reform - critique is insufficient.

**Purdy ’20 -** Jedediah S. Britton-Purdy et al, 20 - ("Building a Law-and-Political-Economy Framework: Beyond the Twentieth-Century Synthesis by Jedediah S. Britton-Purdy, David Singh Grewal, Amy Kapczynski, K. Sabeel Rahman :: SSRN," 3-2-2020, <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3547312)//ey/>

To embrace the possibility of democratic renewal requires rejecting the terms of the Twentieth-Century Synthesis. We believe that the legal realists—and thinkers in a much longer history of political thought—were right in believing that "the economy" is neither self-defining nor self-justifying. The emphasis in these traditions has been the right one: on power, distribution, and the need for legitimacy as the central themes in the organization of economic life. Moreover, precisely because economic ordering is a political and legal artifact, the idea of an "autonomous" economic domain has always been obscurantist and ideological, even when accepted in good faith.' Law does not and never could simply defer to such a realm. Rather, **law is perennially involved in creating and enforcing the terms of economic ordering,** most particularly through the creation and maintenance of markets. One of its most important roles, indeed, is determining who is subject to market ordering and on what terms, and who is exempted in favor of other kinds of protection or provision.' Thus the program of law, politics, and institution building often called "neoliberalism" is, and can only be, a specific theory of how to use state power, to what ends, and for whose benefit.'The **ideological work** of the Twentieth-Century Synthesis has been **to** naturalize and **embed in legal institutions from the Supreme Court to the** Antitrust Office and **W**orld **T**rade **O**rganization a specific disposition of power**.** This power represents a deployment of market ordering that produces intense and cross-cutting forms of inequality and democratic erosion. However, Twentieth-Century Synthesis theorists tend not to see this, precisely because the Synthesis makes it so hard to see (or at least so easy to overlook). If it is to succeed, **law and political economy** will also **require something beyond mere critique. It will require a positive agenda.** Many **new** and energized **voices**, from the legal academy to political candidates to movement activists, are already building in this direction,' **calling for** and giving shape to **programs for more genuine democracy that also takes seriously questions of economic** power **and racial subordination;**171 more equal distribution of resources and life chances;172 more public and shared resources and infrastructues;173 the displacement of concentrated corporate power and rooting of new forms of worker power;174 the end of mass incarceration **and broader contestation of** the long history of the criminalization and **control of poor people and people of color in building capitalism;**175 the recognition of finance and money as public infrastructures;176 the challenges posed by emerging forms of power and control arising from new technologies;177 and the need for a radical new emphasis on ecology.178 These are the materials from which a positive agenda, over time, will be built. **Political fights interact generatively with scholarly and policy debates in pointing** the way **toward a more democratic political economy.** The emergence of new grassroots movements, campaigns, and proposals seeking to deepen our democracy is no guarantee of success. But their prevalence and influence make clear the dangers and opportunities of this moment of upheaval—and highlight the stakes of building a new legal imaginary. 179 Neoliberal political economy, with its underlying commitments to efficiency, neutrality, and anti-politics, helped animate, shape, and legitimate a twentieth-century consensus that erased power, encased the market, and reinscribed racialized, economic, and gendered inequities. By contrast, **a legal imaginary of democratic political economy**, that takes seriously underlying concepts of power, equality, and democracy, **can inform a wave of** legal **thought whose critique and policy imagination can amplify and accelerate these movements for structural reform** and, if we are lucky, help remake our polity in more deeply democratic ways.

#### Reform makes revolution more likely. Rejecting it condescendingly asserts the possibility of radical change is better than the certainty of real improvement.

**Delgado ’87 -** Delgado, Richard [teaches civil rights and critical race theory at University of Alabama School of Law. He has written and co-authored numerous articles and books], “The Ethereal Scholar:  Does Critical Legal Studies Have What Minorities Want?”, Harvard Civil Rights - Civil Liberties Law Review, 1987

Critical scholars reject the idea of piecemeal reform. Incremental change, they argue, merely postpones the wholesale reformation that must occur to create a decent society.38 Even worse, an unfair social system survives by using piecemeal reform to disguise and legitimize oppression. 39 Those who control the system weaken resistance by pointing to the occasional concession to, or periodic court victory of, a black plaintiff or worker as evidence that the system is fair and just.40 In fact, Crits believe that teaching the common law or using the case method in law school is a disguised means of preaching incrementalism and thereby maintaining the current power structure.41 To avoid this, CLS scholars urge law professors to abandon the case method, give up the effort to find rationality and order in the case law, and teach in an unabashedly political fashion. 42

**The** CLS **critique of piecemeal reform is** familiar, **imperialistic and wrong.** **Minorities know from bitter experience that occasional court victories do not mean the Promised Land is at hand.**43 **The critique** is imperialistic in that it **tells minorities and other oppressed peoples how they should interpret events affecting them.**44 **A court order directing a housing authority to disburse funds for heating** in subsidized housing **may postpone the revolution, or it may not. In the meantime, the order keeps a number of poor families warm.** This may mean more to them than it does to a comfortable academic working in a warm office. **It smacks of paternalism to assert that the possibility of revolution later outweighs the certainty of heat now**, unless there is evidence for that possibility**.** The Crits do not offer such evidence.

Indeed, some **incremental changes may bring revolutionary changes closer**, not push them further away**.** Not all **small reforms** induce complacency; some may **whet the appetite for further combat.** The welfare family may hold a tenants' union meeting in their heated living room. CLS scholars' **critique of piecemeal reform** often **misses these possibilities, and neglects the question of whether total change, when it comes, will be what we want.**

#### Adopt a hybridizing strategy - exploiting contradictions in hegemonic discourse maintains critical distance while effectively challenging the state. Kapoor ‘08

**Kapoor, 2008** (Ilan, Associate Professor at the Faculty of Environmental Studies, York University, “The Postcolonial Politics of Development,” p. 138-139)

There are perhaps several other social movement campaigns that could be cited as examples of **a ‘hybridizing strategy’**.5 But what emerges as important from the Chipko and NBA campaigns is the way in which they **treat** laws and **policies**, institutional practices, **and ideological apparatuses as deconstructible**. That is, they refuse to take dominant authority at face value, and proceed to reveal its contingencies. Sometimes, they expose what the hegemon is trying to disavow or hide (exclusion of affected communities in project design and implementation, faulty information gathering and dissemination). Sometimes, they problematize dominant or naturalized truths (‘development = unlimited economic growth = capitalism’, ‘big is better’, ‘technology can save the environment’). In either case, by contesting, publicizing, and politicizing accepted or hidden truths, they hybridize power, challenging its smugness and triumphalism, revealing its impurities. They show power to be, literally and figuratively, a bastard. While speaking truth to power, a **hybridizing** strategy also **exploits the instabilities of power**. In part, this involves showing up and taking advantage of the equivocations of power — conflicting laws, contradictory policies, unfulfilled promises. A lot has to do here with **publicly shaming the hegemon, forcing it to** remedy injustices and **live up to stated commitments** in a more accountable and transparent manner. And, in part, **this involves** nurturing or **manipulating the splits and strains within institutions. Such maneuvering can take the form of cultivating allies**, forging alliances, or throwing doubt on prevailing orthodoxy. Note, lastly, the way in which a **hybridizing** strategy **works with the dominant discourse**. This reflects the negotiative aspect of Bhabha’s performativity. The strategy may outwit the hegemon, but it does so from the interstices of the hegemony. The master may be paralyzed, but his paralysis is induced using his own poison/medicine. It is for this reason that cultivating allies in the adversarial camp is possible: **when you speak their language and appeal to their own ethical horizons,** you are building a modicum of common ground. It is for this reason also that **the master cannot easily dismiss or crush you.** Observing his rules and **playing his game** **makes it difficult for him not to** take you seriously or **grant** you **a certain legitimacy**. The use of non-violent tactics may be crucial in this regard: state repression is easily justified against violent adversaries, but it is vulnerable to public criticism when used against non-violence. Thus, the fact that Chipko and the NBA deployed civil disobedience — pioneered, it must be pointed out, by the ‘father of the nation’ (i.e. Gandhi) — made it difficult for the state to quash them or deflect their claims.

#### Using the government as a heuristic is better pragmatically and forces us to truly investigate political structures in search of ways to improve instead of using abstract solutions for concrete impacts.

**Zannoti ’13 -** Zannoti, Laura, associate professor of Political Science at Virginia Tech., Ph.D. from the University of Washington in 2008 and joined the Purdue University faculty in 2009. “Governmentality, Ontology, Methodology: Re-thinking Political Agency in the Global World”, originally published online 30 December 2013, DOI: 10.1177/0304375413512098, P. Sage Publications MC

By questioning substantialist representations of power and subjects, inquiries on the possibilities of political agency are reframed in a way that focuses on power and subjects’ relational character and the contingent processes of their (trans)formation in the context of agonic relations. **Options for resistance to governmental scripts are not limited to ‘‘rejection,’’ ‘‘revolution,’’ or ‘‘dispossession’’ to regain** a pristine ‘‘freedom from all constraints’’ or **an immanent ideal social order. It is found** instead **in** multifarious and contingent **struggles** that are **constituted within the scripts of governmental rationalities and at the same time exceed and transform them. This approach questions oversimplifications** of the complexities **of liberal political rationalities and** of their interactions with non-liberal political players and **nurtures a radical skepticism about identifying universally good or bad actors or abstract solutions to political problems.** International power interacts in complex ways with diverse political spaces and within these spaces it is appropriated, hybridized, redescribed, hijacked, and tinkered with. **Governmentality as a heuristic focuses on performing complex diagnostics of events.** It invites historically situated explorations and careful differentiations rather than overarching demonizations of ‘‘power,’’ romanticizations of the ‘‘rebel’’ or the ‘‘the local.**’’** More broadly, theoretical formulations that conceive the subject in non-substantialist terms and focus on processes of subjectification, on the ambiguity of power discourses, and on hybridization as the terrain for political transformation, open ways for reconsidering political agency beyond the dichotomy of oppression/rebellion. **These alternative formulations** also **foster an ethics of political engagement,** to be continuously taken up through plural and uncertain practices, **that demand continuous attention to ‘‘what happens’’ instead of fixations on ‘‘what ought to be.’’**83 **Such ethics of engagement would not await the revolution to come** or hope for a pristine ‘‘freedom’’ to be regained**. Instead, it would constantly attempt to twist the working of power by playing with whatever cards are available and would require intense processes of reflexivity on the consequences of political choices.** To conclude with a famous phrase by Michel Foucault ‘‘my point is not that everything is bad, but that everything is dangerous, which is not exactly the same as bad. If everything is dangerous, then we always have something to do. So my position leads not to apathy but to hyper- and pessimistic activism.