**Case**

**1AC**

**Contention 1: The Space-Industrial Complex**

**Private space activity is increasing, 2022 is the crucial year to demonstrate profitability**

**Kramer 1-4-22**

(Miriam, https://www.axios.com/private-human-spaceflight-2022-8ec6082a-e3ae-4d6b-8073-3f8af3e7e2a5.html)

The private human spaceflight industry delivered on long-held promises in 2021, **but 2022 is the year where it will need to prove itself to the public**. Why it matters: The space industry is predicted to be worth more than $**1 trillion within the next 10 years**. But for that to happen, companies will need to turn the extraordinary feats of the last year into **routine operations.** What's happening: Last year, Blue Origin and Virgin Galactic both launched their founders — Jeff Bezos and Richard Branson respectively — to space for the first time. Blue Origin followed that up with two more suborbital human flights in 2021. Those missions marked the culmination of decades of work for the two companies and delivered on a promise of sending more non-professionals to space. SpaceX also consistently launched crewed missions to the International Space Station for NASA, a major customer that will influence the continued growth of the company, and had a huge success with four non-professionals flying to orbit without a pro-astronaut onboard on the Inspiration4 mission. What to watch: Now, those companies are trying to demonstrate they can consistently deliver these services — and turn a profit from them. That means flying more. Blue Origin, Virgin Galactic and SpaceX are expected by space watchers to fly people to space consistently and safely this year. That will be key to determining whether the successes of the last year are one-offs or if they can get into "some sort of rhythm and make some money," Carissa Christensen, founder and CEO of BryceTech, told Axios. SpaceX is planning to launch the Axiom Mission-1 mission to the International Space Station early in 2022, which will act as a followup to the Inspiration4 mission and could be an indicator of the market for more amateur orbital flights. It's hard to gauge whether private companies like Blue Origin are profitable — because their finances aren't open to the public — but routinely launching, which is expensive, can act as a proxy for it, Christensen said. Yes, but: Transforming these missions into routine services won't be easy. It will require companies to increase launch cadence, which is challenging because they're working with relatively newly-developed technology and within complicated regulatory frameworks. The big picture: The public demand for these types of services could also become more clear this year. Studies indicate there is "substantial demand" for suborbital spaceflight, Christensen says. "You have a larger pool of people that can afford it now." According to a May 2021 note sent to investors by analysts Ken Herbert and Austin Moeller, of Canaccord Genuity, the suborbital tourism market could reach $8 billion by 2030 with 1 million potential customers. Between the lines: Demonstrating they can turn a profit will be important for the companies working to make consistent, private human spaceflight a reality, but it's likely a small portion of the revenue for the space industry overall. However, human spaceflight will be one of the most important public-facing elements of the overall industry. Major failures and successes will shift the way the public sees the industry, adding to its support or detracting from it. The bottom line: Last year, the private spaceflight industry showed what it can do, but this year, these companies will need to capitalize on it.

**Private space enterprise *requires* and *contributes to*massive inequality--it’s viewed as a *spatial fix* that allows infinite expansion of state-backed colonialism**

**Penny 20**

(ELEANOR PENNY is a writer, poet and essayist based in London. She is a senior editor at Novara Media, <https://inthesetimes.com/article/space-privatization-future-technology-silicon-valley-elon-musk-jeff-bezos>, 12-17)

The eye-watering upfront costs of these exploratory, high-risk, high-reward endeavors can be absorbed by Silicon Valley venture capitalists and the personal fortunes of its aristocracy**. A concentration of capital stands ready to risk big money to secure a stake in future markets** (which will double down on its power in existing ones). The point is to ensure a slice of the territory everyone else will be clamoring for. This form of ​“creative destruction”—an idea developed by economist Joseph Schumpeter, understood in neoliberalism to describe the boom-bust cycle of innovation — **is often packaged in the mythology of moonshot genius that drives human progress**. But Schumpeter’s theory has a less discussed underbelly: Such creative destruction is usually twinned with **market capture.** As competitors are tossed onto the **scrap heap of history** by their own sudden irrelevance, **oligarchies and monopolies flourish**. The riches of the asteroid belt make earthly mining look positively parochial. The problem is that a sudden, vast supply of (formerly) precious metals would make market prices plummet. Journalist Aaron Bastani, author of Fully Automated Luxury Communism, notes that satellite-delivered digital information has the potential to replace our earthbound Internet networks with ​“space-based global Internet” — the way music streaming has replaced CDs and CDs replaced cassettes and vinyl — or to at least render them much cheaper (through, for example, open-access 3D printing). SpaceX and Blue Origin surely share a goal to make space transport cheaper. The question is, for whom? **These ventures train their sights on infinite excess**, with dwindling marginal costs as the supply of key materials and digital resources expands. This paradigm is great for those interested in the advancement of human civilization, but not so much for a grinning billionaire’s fixation on the bottom line. At first glance, expanding industry beyond Earth sounds like a pragmatic fix to the **earth-shatteringly simple dilemma faced by capitalism**: that it must grow to survive, but the planet **it grows upon is finite**. But to maintain profit margins in conditions of plenty (a demand of industry), **legal and political fixes** are required. If you exclusively own mining rights to asteroids rich in platinum — and precious little platinum is left on Earth — you can charge whatever you like for platinum. The diamond industry perfected this technique decades ago. (Elon Musk’s family fortune comes partially from a Zambian emerald mine.) Hence, the focus of the new space race is not on the production of goods or their most efficient sourcing, but on **ownership of land and transport networks**. In this latest phase of capitalism, as national growth slows, productive industries dwindle and wealth concentrates in fewer hands. As economist Thomas Piketty has observed, this phase is accompanied by a pivot toward rent-seeking as a profit mechanism. In other words, the scramble for space is the scramble to own satellites and ​“starways,” gatekeep the riches of the solar system and charge rent on the moon. Against this backdrop, Space Force might seem retrograde, a warped nostalgia for a time when the space race was about petty terrestrial wars rather than Musk’s supposedly enlightened vision to colonize Mars. **In reality, the two visions go hand in hand. Military might physically captures and secures territory, enforces the American political and legal apparatus and ensures business can function** (even on the moon). The darlings of this new space age paint their vision as daring futurism, a wild-eyed libertarian dream of human elevation. **But history repeats and the story is old.**Like Bezos and Musk, Cecil Rhodes — mining magnate and premier villain of the British Empire — also succumbed to dreams of wealth in the night sky. ​“**Expansion is everything**,” Rhodes said. ​“I would annex the planets if I could.” Where technology opens up the yawning unknown of new territory glittering with potential profit, private enterprises hustle for dominance — backed by the military and legal capacities of earthbound nations. **Colonialism in space is not some post-humanist utopia**, but the age-old dominion of land barons and mining magnates, billionaires sloughing off the wreckage of one planet and setting out for the stars.

**Capitalism is not natural or inevitable, extending it to space is k2 sustain it. Empirics prove it will be disastrous**

**Penny 20**

(ELEANOR PENNY is a writer, poet and essayist based in London. She is a senior editor at Novara Media, <https://inthesetimes.com/article/space-privatization-future-technology-silicon-valley-elon-musk-jeff-bezos>, 12-17)

**Space is our birthright**. ​“Americans should have the right to engage in commercial exploration, recovery and use of resources in outer space,” President Donald Trump wrote April 6, 2020, issuing the ​“Executive Order on Encouraging International Support for the Recovery and Use of Space Resources.” In the stroke of a pen, Trump planted the U.S. flag on ​“the Moon, Mars and other celestial bodies.” As Trump declared these space lands and resources open for business, you could hear the cheers — mostly from ​“moonshot” corporations that have clamored to sweep away the patchy, unregularized Cold War-era space law in favor of new, unregulated corporate plunder of the solar system. While the institution of private land ownership is now widely taken for granted, it was — **like many so-called natural things — invented**. Before the muddied, grueling transition from feudalism to capitalism, peasants in Britain and much of Western Europe depended on their right to farm, forage and harvest on common, community lands. The land was controlled by local lords, but it belonged (in a loose, de facto sense) to the communities living on it and dependent upon it. Eventually, common lands were ​“enclosed” and became the private property of aristocrats. This exclusive right to land use (to own and profit from land) was the contrivance that established the new economic order. No longer held in common, the planet’s resources were parceled off to strictly private hands. No longer could peasants scrape by, subsisting on the commons. Instead, they depended on the grace and favor of a wage. Life in feudal times was no bucolic idyll, but enclosure was synonymous with **disaster, destitution and death for many people**. This model was mirrored in the capture, theft and enclosure of colony lands, the people (and resources) of which fueled the early capitalist transition and later the industrial revolution. **Capitalism must grow to persist,** and as it grows it must transform ripe, unregularized commons into private fiefdoms — at home and afar. So **it seems only ​“natural” to carve up the moon into stretches of valuable real estate**, just like Manhattan and the metal mines in the Democratic Republic of Congo. After all, Earth’s resources dwindle by the day, and boundless resources beyond the stratosphere could be a backstop for planetary scarcity. Never mind that our crisis of resources is, in part, **the result of this system of private ownership that rewards ruthless, short-term profiteering at the expense of the long-term survival of the natural commons.**This future access to a new natural commons is now a stress test on governmental priorities. As Trump proclaimed, ​“Outer space is a legally and physically unique domain of human activity, and the United States does not view it as a global commons.” Trump’s executive order to ​“encourage international support for the public and private recovery and use of resources in outer space” heralds yet another **public-private boondoggle, where nominally public institutions thrash out fresh boundaries of corporate activity**. As an example, look no further than SpaceX’s Crew Dragon capsule, which successfully transported NASA astronauts Bob Behnken and Doug Hurley to the International Space Station on May 31, 2020. The NASA-SpaceX crossover branding leaves no room for misinterpretation: The next small steps for mankind will be giant leaps for corporate America. Elon Musk, who founded SpaceX in 2002, talks misty-eyed about a relatively near future when humanity will have risen out of the mud, setting its sights on colonizing Mars — with SpaceX transportation rocketing there. In 2020, Musk began launching a cavalcade of thousands of satellites into low-Earth orbit to form the Starlink satellite system. As of November 2020, nearly 900 satellites had been launched (42,000 are planned in total). This network will potentially seed an **extraplanetary monopoly** for key economic infrastructure, such as domestic internet access. Fellow billionaire escapist Jeff Bezos, Amazon CEO, has been romanced by the wealth among the stars as well, founding his own aerospace company, Blue Origin, back in 2000. ​“We are going to build a road to space,” Bezos said in 2019. ​“And then, amazing things will happen.” Bezos has invited us all to cosplay his daydreams with the Amazon-funded, interplanetary sci-fi thriller The Expanse, in which a roll call of stock anti-heroes (the rogue policeman, the war-beleaguered pilot, etc.) tumble through a far future when only wise plutocratic innovators can plumb interstellar riches and deliver the solar system from interstellar war. Microsoft, too, has its fingers in the intergalactic pie, launching Azure Orbital in September 2020 to enable satellite operators on its cloud computing platform, along with a SpaceX partnership the following month. According to Forbes, **2019 was a record year for private space investments**, with ​“venture capitalists [investing] $5.8 billion in 178 commercial space startups worldwide.” As Earth’s billionaires burnish the power of new stratospheric tech, Trump launched Space Force, the first new branch of the U.S. military in more than seven decades. ​“Space is the world’s newest war-fighting domain,” Trump said. ​“Amid grave threats to our national security, American superiority in space is absolutely vital.” Space exploration has long been tied to military ambition. From its Cold War founding, NASA’s task was to advance the practical interests of the American state as it squared off against the Soviet behemoth. The new field of battle included space-guided missiles and satellite technology. Astronauts are still generally selected from the ranks of the military. Grumman (now better known as half of Northrop Grumman) made parts for both the NASA spacecraft that leapt into the great unknown and the military machines that waged war in Vietnam. As the shadow of nuclear war retreats in the bright light of a digital dawn, the mission of Space Force is to protect the economic and military infrastructure (communications and surveillance technology) seemingly threatened by rival global powers (namely, Russia and China) gearing up their own military space operations. The 1967 Outer Space Treaty, signed by the United States, the United Kingdom and the Soviet Union, attempted to guard against the militarization and the privatization of our shared stratosphere. The treaty limited governmental (and non-governmental) bodies from sending nuclear weapons into space and prohibited the annexation of the moon and temptingly mineral-rich asteroids. As the treaty outlined, any country could use and explore outer space but there could be no ​“appropriation” of astral territory. It was, at heart, a disarmament treaty — one whose ropey legalities were enforced by the now-defunct Cold War brinkmanship between its main two signatories. The treaty never foresaw the dizzying rise of **private enterprise clamoring for a slice of the sky**. Nor did it foresee the slow shelving of publicly funded U.S. space exploration (especially the manned variety) **that would allow venture capitalists to stake their claim in a new space scramble.**

**Private control of space replaces democracy with technocracy. Mars should stay *red*, not become a racist country club**

**Spencer 17**

(Keith A. Spencer is a freelance writer and graduate student from the Bay Area. <https://www.jacobinmag.com/2017/02/mars-elon-musk-space-exploration-nasa-colonization> , 2-5)

As the Western liberal order continues to unravel, can you really blame anyone who wants to get off this planet? Since space travel became technologically feasible in the twentieth century, many thinkers — from Arthur C. Clarke to Buckminster Fuller — envisioned the human colonization of other planets as all but inevitable. “Man will not always stay on Earth,” wrote Soviet rocket scientist Konstantin Tsiolkovsky, “the pursuit of light and space will lead him to penetrate the bounds of the atmosphere, timidly at first, but in the end to conquer the whole of solar space.” In their heydays, both the American and Soviet space programs funded research into Mars colonization, viewing it as the next logical step for humanity. In the past two decades however, people have started to pin their hopes for intergalactic travel on **private groups instead of public agencies**. While President Obama was privatizing much of the American space program, a flurry of ventures released competing proposals to visit and/or colonize the red planet. These schemes’ feasibility and harebrained-ness vary: the Mars Foundation, run by multimillionaire former investor Dennis Tito, is soliciting private donations to send a couple on a flyby of the red planet. Mars One, a Dutch nonprofit, wants to fund a permanent human colony through “merchandise sales, ads on video content, brand partnerships, speaking engagements, [b]roadcasting rights, intellectual property rights, games & apps, and events.” The most famous — and perhaps most likely to succeed — comes from entrepreneur and engineer Elon Musk, the multibillionaire CEO of SpaceX and Tesla Motors. Musk’s articulation of his Mars mission reveals not only what’s wrong with how we think about extraterrestrial colonies and resources, but also how little faith most people have in democracy here on Earth. Interplanetary Technocracy Given his reputation as an engineering genius, Musk’s vision for colonization seems the most plausible of the private missions to Mars. After all, SpaceX, which he admitted to founding specifically to colonize the solar system, became the first private company to successfully launch a rocket into orbit in 2008. In September 2016, at the International Astronautical Congress in Guadalajara, Musk laid out a detailed vision for his colonization project, including financial estimates, engineering specs for the reusable “Interplanetary Transit System,” and the price of a passenger ticket — around $200,000. Musk’s presentation even included a snazzy computer-animated video of the transit system in action and details about the long trip there, which would offer colonists games, restaurants, and entertainment. “It’ll be, like, really fun to go . . . You’re gonna have a great time,” Musk said. His approach to colonizing Mars comes straight out of Silicon Valley’s playbook: Musk has taken a “problem” — how to colonize Mars — and hacked a feasible “solution” that is one part engineering, one part moxie. Just add investors and we’ll be building cities on the red planet in no time. Though vague, Musk reiterated that his vision would need funding. His talk of “tickets” implies that colonists will likely pay for much of the mission. Unlike a space agency’s astronaut selection process, then, his Mars mission will be limited to those who can afford it. In that sense, Musk’s colonization plan looks a lot like joining a **country club** or gated community — or any other model of private access to space for those who can afford it. Musk’s proposal — heavy on the engineering and business details, light on the philosophical or political implications of colonization — **epitomizes technocracy**. He doesn’t seem interested in thinking through Mars’s **policy or governance**, the labor necessitated by building a civilization from scratch, or the problems that will arise from sending rich tourists to self-manage in a place with scant resources demanding communal organization and thinking. The True Value of Mars For some, sending a few rich folks off to Mars seems like a great idea. After all, it’s hardly an Eden waiting to be destroyed. Unlike previous colonial projects, there are no natives to exploit; no wildlife to hunt to extinction; no ecosystem to radically alter; no fossil fuels to extract; and no climate in danger of destruction from carbon emission. Mars’s atmosphere is already 96 percent carbon dioxide! Why not let Musk and his millionaire buddies take off for a few rounds of golf on the frosted dunes? If they get stuck there, all the better. From a humanistic perspective, however, even a lifeless world like Mars holds incredible scientific, educational, and environmental value. To let private interests colonize, terraform, or populate it without considering this collective value would be short-sighted. Indeed, when it comes to colonization, we should hope humanity has learned from its past mistakes and is ready to set upon a **more democratic process**. Perhaps Earth can agree to hold a public discussion before we set about strip-mining Mars’s glorious dunes, vistas, and mountains, lest the tallest mountain in the solar system become a trash heap like Everest. Government space agencies have gone to great lengths to keep the scientific and social benefits of publicly funded exploration intact. This is why NASA makes all its mission data public, and also why it insists on sterilizing space probes to avoid contaminating other worlds with cellular life from Earth — one stray terrestrial extremophile could confuse the search for microbial life off-planet. The agency, recognizing its work’s educational value, has sent elementary school children’s experiments into space and hosted public naming competitions for geographic features. Likewise, NASA thinks beyond the engineering challenges: they also consider space travel’s psychological and biological effects, surely an important field of study in anticipation of the long space flights required for interplanetary travel. **Private industry will be unlikely to follow these collective practices**, as **its desire for profit or for exclusive property rights** — physical and intellectual — **will outweigh any public benefit.** I Want to Believe The public and media reaction to Musk’s presentation — more than the presentation itself —reflects the current state of our politics. “The mood at the conference was almost as giddy as a rock concert or the launch of a new Apple product, with people lining up for Mr. Musk’s presentation a couple of hours in advance,” wrote Kenneth Chang in the New York Times, who devoted 1,200 words to it. “Elon Musk finally told the world his vision for colonizing Mars, and it turned out to be one hell of a show,” exclaimed Loren Grush in a video article for the Verge. Grush noted that Musk drew an “insane crowd,” describing how “people actually stampeded into the hall where his lecture was in order to get a good seat.” He began in lofty tones: “I want to . . . make Mars seem possible. Make it seem as though it is something we can do in our lifetimes.” This statement implied that we needed some great technological leap forward before embarking on this adventure, but, in fact, travel to Mars has been possible for well over half a century. Given the political will, we can go right now. The subtext of Musk’s message, then, was that our democratic governments will never execute big science and engineering projects. People should trust in the private vision for colonization and space travel instead. In Earth politics, this lack of faith in democratic institutions is nothing new. **This idea’s policy implications** — that collectively we can’t have big public projects or any sort of real democratic decision-making, and must cede our whims to privately funded foundations and technocratic “experts” — have already taken hold of most countries. As far as I could find, none of the magazines that covered Musk’s announcement mentioned this **metatheme**, namely, that a public and democratically organized colonization of Mars will never happen. No one questioned the premise that we must let billionaires decide how and when to go to Mars — or that it is the **only possible way to get there.**Musk’s tech-industry social circle benefits from **branding technology as synonymous with progress**. As a result, many tech employees work long hours to achieve this invisible notion of progress, but their work just fattens their employer’s profit margins. One can imagine the grueling labor required to make an inhospitable planet habitable. On Mars, employees would exhaust themselves for a corporation under the guise of “survival.” After all, regardless of whether a foundation or a corporation spearheads the colonization effort, they will be incentivized, even forty million miles away, to **squeeze as much labor out of their workers at the lowest cost.** Further, the question of who is allowed to go to Mars will become as important as the question of who isn’t. If, as Musk proposes, the trip requires a “ticket” — which, as he claims, will eventually drop to only $100,000 — it seems probable that those who can afford to go will mostly resemble, ethnically and politically, Earth’s ruling class. Imagine: **the red planet turned racist country club**. **These questions matter more than how to engineer a rocket or how to build greenhouses or how to harvest water**. In fact, state-funded research has already largely solved these technical problems — or, at the least, led to numerous creative ideas about making a Mars colony self-sufficient. The Martian Commons Any colonization effort on Mars — even if only a small number of humans go — will present huge political challenges in terms of the labor and personal rights of its citizens. To wit: what kinds of reproductive restrictions will exist on a planet of scarce resources? How will colonists ration food and activity? What about personal privacy? If Martian citizens are working in a life-or-death situation, can the workers strike? At least in its early years, Mars would have a scarcity economy — in other words, resources would likely have to be rationed in order for the collective to survive. A private colony would be unlikely to make any kind of **egalitarian guarantee** — after all, if there’s a ticket price, there will certainly be a Martian service economy pampering the space tourists. Inequalities will emerge in terms of labor, housing, food, and access to other resources. In fact, we already know what a privatized Mars might resemble: Mount Everest. At higher elevations, it becomes a barren, lifeless, cold world, where climbers require oxygen tanks to survive. The cost of ascending is as steep as the mountain: between $30,000 to $100,000. Climbers’ journeys are only made possible by their Sherpas’ exploited labor, many of whom die in accidents and are paid as little as $5,000 a year by Western companies. Now imagine this situation replicated forty million miles off, on a lifeless planet, where two-way Earth communication takes almost an hour, and you can envision how dire things could get. A New Hope Musk spent nearly an hour of his speech detailing the technological aspects of Mars travel: the landers, the rockets, the fuel costs, and so on. Musk takes a technology-first approach and rarely mentions the numerous social aspects. His speech and its collective reactions attest to a naïve, John Galt fantasy about how policy and engineering come to pass: through the **mind of the lone genius, who alone holds the key to humanity’s future**. We saw the same fantasy at work last week when, in the wake of President Trump’s executive order banning emigration from seven majority-Muslim countries, Starbucks CEO Howard Schultz announced his plan to hire ten thousand refugees and was immediately hailed as a liberal hero. The message was clear: we can’t hope to help refugees ourselves, or on a democratic basis — we must rely on the whims of the rich to push forward progressive causes. Alas, the reaction to Musk’s speech also demonstrates how public sentiment has changed: collectively, we no longer believe in public space exploration. Even if we know state agencies can launch a Mars mission, few think it will happen. **This doesn’t bode well for how we think of the commons**. Are rich people and their foundations the only ones who can save us? The plethora of private Mars proposals reflects a lack of faith in democracy on Earth, in particular in our democratic influence over the directions science and engineering research take. And while faith in public institutions sits at an all-time low, we seem more than happy to hear what the rich can make possible and to believe their promises. Musk is just one of many technocrats who think of a Mars voyage as a technological problem. Not only is it not a technological problem, it’s not even a problem. **Colonization of Mars should be seen as a complex social and political policy, with so much potential to create inequality and oppression that it cannot rationally be undertaken without political consensus and a stratagem for maintaining democracy and egalitarianism**. We are ready to colonize Mars, and have been for half a century. Doing so without a democratic plan will present unimaginable dangers for the planet and colonists alike. As socialists, our rallying cry should be this: Keep the red planet red!