# Lay AC

#### I affirm the resolution resolved: The appropriation of outer space by private entities is unjust.

#### Because the resolution questions what is unjust, it implies a moral question, so I value morality.

#### My value criterion is utilitarianism, which is to maximize expected well-being for the most amount of people.

#### Prefer my framework.

#### [1] Moral choices may only be decided by which results in the net-most good.

#### [2] Real World: Governments predict success of policies by analyzing benefits and harms for all their constituents. Our framework teaches students the best skills for the real world.

#### This means you should vote affirmative if I prove that the appropriation of outer space via private entities brings more pain than pleasure

## C1: Structural Violence

### Subpoint A: Colonialism

#### Space development exacerbates colonialism.

Smiles 20’ – Deondre Smiles, Deondre Smiles, Ph.D. is a postdoctoral scholar at The Ohio State University. A citizen of the Leech Lake Band of Ojibwe, his ongoing research agenda is situated at the intersection of critical Indigenous geographies and political ecology, centered in the argument that tribal protection of remains, burial grounds, and more-than-human environments represents an effective form of ‘quotidian’ resistance against the settler colonial state, “The Settler Logics of (Outer) Space.”, Society and Space, October 26th, 2020, [https://www.societyandspace.org/articles/the-settler-logics-of-outer-space#] Accessed 12/08/21 AHS // AP

Space represents yet another ‘unknown’ to be conquered and bent to America’s will. However, such interplanetary conquest does not exist solely in outer space. I wish to situate the very real colonial legacies and violence associated with the desire to explore space, tracing the ways that they are perpetuated and reified through their destructive engagements with Indigenous peoples. I argue that a scientific venture such as space exploration, but instead draws from settler colonialism and feeds back into it through the prioritization of ‘science’ over Indigenous epistemologies. I begin by exploring the ways that space exploration by the American settler state is situated within questions of hegemony, imperialism, and terra nullius, including a brief synopsis of the controversy surrounding the planned construction of the Thirty Meter Telescope on Mauna Kea. I conclude by exploring Indigenous engagement with ‘space’ in both its Earthbound and beyond-earth forms as it relates to outer space, and what implications this might have for the ways we think about our engagement with space as the American settler state begins to turn its gaze skyward once again. I position this essay alongside a growing body of academic work, as well as journalistic endeavors (Haskins, 2020; Koren, 2020) that demands that the American settler colonial state exercise self-reflexivity as to why it engages with outer space, and who is advantaged and disadvantaged here on Earth as a result of this engagement. A brief exploration of what settler colonialism is, and its engagement with ‘space’ here on Earth is necessary to start. Settler colonialism is commonly understood to be a form of colonialism that is based upon the permanent presence of colonists upon land. This is a distinction from forms of colonialism based upon resource extraction (Wolfe, 2006; Veracini, 2013). What this means is that the settler colony is intimately tied with the space within which it exists—it cannot exist or sustain itself without settler control over land and space. This permanent presence upon land by ‘settlers’ is usually at the expense of the Indigenous, or original people, in a given space or territory. To reiterate: control over space is paramount. As Wolfe states, “Land is life—or at least, land is necessary for life. Thus, contests for land can be—indeed, often are—contests for life” (2006: 387). Without land, the settler state ‘dies’; conversely, deprivation of land from the indigenous population means that in settler logic, indigeneity dies (Povinelli, 2002; Wolfe, 2006.) The ultimate aims of settler colonialism is therefore the occupation and remaking of space. As Wolfe (2006) describes, the settler state seeks to make use of land and resources in order to continue on; whether that is through homesteading/residence, farming and agriculture, mining, or any number of activities that settler colonial logic deems necessary to its own survival. These activities are tied to a racist and hubristic logic that only settler society itself possesses the ability to make proper use of land and space (Wolfe, 2006). This is mated with a viewpoint of landscapes prior to European arrival as terra nullius, or empty land that was owned by no one, via European/Western conceptions of land ownership and tenure (Wolfe, 1994). Because of this overarching goal of space, there is an inherent anxiety in settler colonies about space, and how it can be occupied and subsequently rewritten to remove Indigenous presence. In Anglo settler colonies, this often takes place within a lens of conservation. Scholars such as Banivanua Mar (2010), Lannoy (2012), Wright (2014) and Tristan Ahtone (2019) have written extensively on the ways that settler reinscription of space can be extremely damaging to Indigenous people from a lens of ‘conservation’. However, dispossession of Indigenous space in favor of settler uses can also be tied to some of the most destructive forces of our time. For example, Aboriginal land in the Australian Outback was viewed as ‘empty’ land that was turned into weapons ranges where the British military tested nuclear weapons in the 1950s, which directly led to negative health effects upon Aboriginal communities downwind from the testing sites (Vincent, 2010). Indigenous nations in the United States have struggled with environmental damage related to military-industrial exploitation as well. But, what does this all look like in regard to outer space? In order to really understand the potential (settler) colonial logics of space exploration, we must go back and explore the ways in which space exploration became inextricably tied with questions of state hegemony and geopolitics during the Cold War. US and Soviet space programs were born partially out of military utility, and propaganda value—the ability to send a nuclear warhead across a great distance to strike the enemy via a ICBM and the accompanying geopolitical respect that came with such a capability was something that greatly appealed to the superpowers, and when the Soviets took an early lead in the ‘Space Race’ with Sputnik and their Luna probes, the United States poured money and resources into making up ground (Werth, 2004). The fear of not only falling behind the Soviets militarily as well as a perceived loss of prestige in the court of world opinion spurred the US onto a course of space exploration that led to the Apollo moon landings in the late 1960s and the early 70s (Werth, 2004; Cornish, 2019). I argue that this fits neatly into the American settler creation myth referenced by Trump—after ‘conquering’ a continent and bringing it under American dominion, why would the United States stop solely at ‘space’ on Earth? To return to Grandin (2019), space represented yet another frontier to be conquered and known by the settler colonial state; if not explicitly for the possibility of further settlement, then for the preservation of its existing spatial extent on Earth. However, scholars such as Alan Marshall (1995) have cautioned that newer logics of space exploration such as potential resource extraction tie in with existing military logics in a way that creates a new way of thinking about the ‘openness’ of outer space to the logics of empire, in what Marshall calls res nullius (1995: 51)[i]. But we cannot forget the concept of terra nullius and how our exploration of the stars has real effects on Indigenous landscapes here on Earth. We also cannot forget about forms of space exploration that may not be explicitly tied to military means. Doing so deprives us of another lens through which to view the tensions between settler and Indigenous views of space and to which end is useful. Indeed, even reinscribing of Indigenous space towards ‘peaceful’ settler space exploration have very real consequences for Indigenous sovereignty and Indigenous spaces. Perhaps the most prominent example of the fractures between settler space exploration and Indigenous peoples is the on-going controversy surrounding the construction of the Thirty Meter Telescope on Mauna Kea, on the island of Hawaii. While an extremely detailed description of the processes of construction on the TMT and the opposition presented to it by Native Hawai’ians and their allies is beyond the scope of this essay, and in fact is already expertly done by a number of scholars[ii], the controversy surrounding TMT is a prime example of the logics presented towards ‘space’ in both Earth-bound and beyond-Earth contexts by the settler colonial state as well as the violence that these logics place upon Indigenous spaces, such as Mauna Kea, which in particular already plays host to a number of telescopes and observatories (Witze, 2020). In particular, astronomers such as Chanda Prescod-Weinstein, Lucianne Walkowicz, and others have taken decisive action to push back against the idea that settler scientific advancement via space exploration should take precedence over Indigenous sovereignty in Earth-space. Prescod-Weinstein and Walkowicz, alongside Sarah Tuttle, Brian Nord and Hilding Neilson (2020) make clear that settler scientific pursuits such as building the TMT are simply new footnotes in a long history of colonial disrespect of Indigenous people and Indigenous spaces in the name of science, and that astronomy is not innocent of this disrespect. In fact, Native Hawai’ian scholars such as Iokepa Casumbal-Salazar strike at the heart of the professed neutrality of sciences like astronomy. As Casumbal-Salazar and other scholars who have written about the TMT and the violence that has been done to Native Hawai’ians (such as police actions designed to dislodge blockades that prevented construction) as well as the potential violence to come such as the construction of the telescope have skillfully said, when it comes to the infringement upon Indigenous space by settler scientific endeavors tied to space exploration, there is no neutrality to be had—dispossession and violence are dispossession and violence, no matter the potential ‘good for humanity’ that might come about through these things

#### Outer space appropriation augments colonial violence

Durrani 19’ – Haris Durrani, Haris Durrani is a JD/PhD candidate at Columbia Law School and Princeton University (History of Science). He is winner of the Sacknoff Prize for Space History, “Is Spaceflight Colonialism?”, The Nation, July 19th, 2019, [https://www.thenation.com/article/world/apollo-space-lunar-rockets-colonialism/] Accessed 12/10/2021 AHS// AP

Spaceflight almost invariably involves activities that directly subjugate marginalized peoples. Space provides a strategic military position from which to continue postcolonial violence on Earth, exacerbating inequalities between spacefaring countries and the so-called “Third World.” Space is critical for surveilling and enacting violence upon communities throughout the Third World, from [Moroccan spy satellites](http://spaceflight101.com/vega-vv11/vega-launches-mohammed-vi-a-satellite/) over occupied Western Sahara, to [remote sensing](https://www.wired.com/story/how-the-government-controls-sensitive-satellite-data/) of Afghanistan and other strategic regions, to monitoring of the [US-Mexico border](https://www.sspi.org/cpages/how-satellites-secure-the-border): The United States spends $10 billion per year on publicly known space projects, but $15 billion on classified military activities. Moreover, drones and most other military technologies that harm and surveil marginalized communities depend on global positioning technology and space-based communications. Significant advances in space technology developed in the context of US intervention in the Middle East and Latin America: Remote sensing and GPS developed in the Gulf War, and, decades earlier, the first US telecommunications satellites [were used to communicate](http://webdoc.sub.gwdg.de/ebook/p/2005/CMH_2/www.army.mil/cmh-pg/books/vietnam/comm-el/ch2.htm) with troops in Saigon. More recently, consider the US Air Force’s aforementioned Space Fence or Boeing’s [Space Based Space Surveillance](https://eoportal.org/web/eoportal/satellite-missions/content/-/article/sbss) satellite constellation and [X-37B](https://www.space.com/40227-x-37b-space-plane-200-days-in-orbit-otv5.html) orbital drone, which has orbited Earth several times over the past decade. These claims over territory, resources, and populations highlight the enormous accumulation of capital necessary to access space. The US government and its corporate entities can afford the cost of spaceflight because it is but a fraction of their annual budgets. But for developing countries and marginalized communities, that cost is prohibitive: Spending on space is contingent on accumulated wealth. As with access to the sea or air, access to outer space, then, is not solely about obtaining resources, services, and other benefits in areas that exist outside of what are perceived as “conventional” borders. It is also about drawing on resources—capital, labor, raw materials, territory, intellectual property, expertise—from “back home,” Earth, that make those activities possible in the first place. In this way, the history of spaceflight is the story of powerful nations consolidating power against marginalized communities within their borders and throughout the Third World…Outer space governance thus represents a unique kind of postcolonial order.

### Subpoint B: Resource Apartheid

#### Space development cements inequality by favoring the rich

**Edythe 12’ - Dr. Edythe Weeks in her book on Space Development International Relations and Space Law in 2012** [“Outer space development, international relations and space law : a method for elucidating seeds” Newcastle upon Tyne, Cambridge Scholars Publishing]cdm

The global community is experiencing economic recession, natural disasters, lack of opportunity, employment anxiety, failing K-12 programs, widening inequality gaps, uprisings, revolutions, revolts, unmet educational goals, and a general failure to uplift, inspire, and provide meaningful opportunities for significant portions of our population. In the United States of America, the wars in Iraq and Afghanistan failed to jumpstart the economy; the Dow Jones failed; Wall Street failed; millions of working people lost their houses to foreclosure; tent communities and homeless populations are on the increase; many people are experiencing depression, anxiety, career anxiety; we see alarming rates of people dropping out of high school and college; and there is a general lack of opportunities, along with high rates of job loss. People need something that will allow them to focus anew their talents, energies, abilities, and gifts, and use this bleak climate as an opportunity for positive change. Outer space development is emerging as an answer to this state of crisis. The question is: To whom will the benefits accrue? Many strategic decisions have already been taken regarding space development of which the global general public is unaware. Once legal rights to space resources are granted, only those with the capital to take advantage of new laws and policies will be in a position to profit from the new space industries. Only those who are in a position to know about outer space development will be in position to take advantage of the opportunities. It is important to remember that the global general public has for several decades being paying the start-up costs for space exploration research, science, and technology. It‘s not too late to factor in equality before an infrastructure of inequality is forever with us as we venture to establish the final frontier.

#### The exclusivity of space exploration marginalizes billions and biases scientific efforts

**Edythe 14’ - Dr. Edythe Weeks Acta Astronautica 2014** [Ayodele Adekunle Faiyetoleb “Science, technology and imaginable social and behavioral impacts as outer space develops” Volume 95, February–March 2014, Pages 166–173]cdm

Nations characterized as “developing” and therefore, perceived as uninterested in outer space, may now be very interested in playing a key role in the development of outer space and its vast resources. For example, there is the aspect of information technology, which has brought about unprecedented opportunities for global and peaceful cooperation, and has paradoxically been used to display shows of technological rivalry or war. Here is a telling insight: The world’s first geosynchronous satellites were launched by NASA. The first was launched on February 14, 1963. Syncom 2 was launched July 26, 1963, becoming the world’s first successful geosynchronous satellite. Posi-tioned over the Atlantic, the satellite set new records in long range communications including a telephone con-versation between President John F. Kennedy and Niger-ian Prime Minister Abubakar Tafawa Balewa. The following year, on August 19, 1964, Syncom 3 was hurled into geosynchronous orbit and positioned above the Pacific near the International Date Line. Shortly after the arriving on station, the satellite transmitted a TV relay of the Olympic Games in Tokyo, Japan, the first TV program ever to span the Pacific from synchronous orbit. For several years the two satellites served as primary com-munication links between Southeast Asia and the wes-tern Pacific ( [14]). As communication satellite technology developed, international cooperation grew. Industry growth and international development has fostered peaceful coopera-tion between nations. Cooperation is a more logical and harmonious way for space activities and exploration. “In 1984 President Reagan articulated an interest in construct-ing an international space station for commercial, techno-logical, and scientific purposes. The international community heeded this call in September 1988 by signing the International Space Station Multilateral Intergovern-mental Agreement” ( [34]: 81). Following the success of the International Space Station (ISS), which was built on the peaceful working together of the erstwhile cold war countries of USA and Soviet Russia, it has demonstrated working together with global partners is even more achievable. Therefore, outer space could be better developed using global efforts [6, 10], which could include developed and developing countries. We believe that more of this can occur if we include and involve more people in the process of outer space develop-ment. For example, Nigeria and many other countries of the global South have been “actors” during the first wave of outer space development by the transatlantic testing of long distance communication over satellites, setting a new record significantly occasioned by the communication between President John F. Kennedy and the only prime minister of an independent Nigeria, Prime Minister Abuba-kar Tafawa Balewa. Thus we would like to help effect a shift in the ideology that suggests outer space development is only important for a few people in a few nations. Outer space development is important for all humankind. If we miss this opportunity, all that will remain is more of the negative reflections on what went wrong. The resultant effect will again be that inequality has been further established causing more of the phenomenon aptly described by Seralgedin [30] as “scientific apartheid”. He states: There is a real danger that the benefits of proprietary science will serve to bring more and more to the privileged few rather than serve the needs of the billions of the marginalised poor and their children. That the developing countries will not be able to adjust fast enough to the needs of the competitive global economy of science-based production and knowledge-based income.

## C2: Space Junk

#### **Space debris is rising to dangerous levels**

Choudhury 18’ – Saheli Roy Choudhury, Saheli Roy Choudhury is a reporter for CNBC.com. She reports on technology news in Asia Pacific, with a focus on artificial intelligence, 5G and cybersecurity. She also covers India and writes on market moves in the region, “Space junk is a big problem and it’s going to get worse”, CNBC, 09/18/18 [<https://www.cnbc.com/2018/09/18/wef-tianjin-space-junk-is-a-big-problem-and-its-going-to-get-worse.html>] Accessed 12/12/21 AHS//AP

Space debris has become a huge problem. Their accumulation in Earth’s orbit has become a hindrance and can endanger future missions to the moon or Mars, according to the chief of a company that’s trying to solve the issue. A surge in aggressive space ventures in recent years has seen a build-up of space junk, and they are set to grow exponentially, Nobu Okada, founder and CEO of Astroscale, told CNBC at the [World Economic Forum’s](https://www.cnbc.com/tianjin--world-economic-forum/) Annual Meeting of the New Champions in Tianjin, [China](https://www.cnbc.com/china/). “Over the last 5 to 7 years, we saw (about) 2,000 space ventures in the world. Their plans are so aggressive, they’re going to launch 10,000 to 20,000 satellites over the next 5 to 10 years,” he said. “We see the exponential growth of objects in space.” There are [more than 500,000 pieces of junk](https://www.nasa.gov/mission_pages/station/news/orbital_debris.html) floating around Earth’s orbit, including defunct satellites, rocket boosters, nuts and bolts, all of which pose a substantial threat to astronauts and spacecraft, according to U.S. space agency NASA. [The European Space Agency said](https://www.esa.int/Our_Activities/Operations/Space_Debris/Space_debris_by_the_numbers) that as of January 2018, there are about 29,000 objects larger than 10 centimeters, around 750,000 objects that range between 1 cm to 10 cm and about 166 million objects between 1 millimeter to 1 cm in size. Okada said that pieces of debris fly around the Earth throughout the day, and there are plenty of near-miss situations where two objects almost collide. When they do hit each other, those collisions end up creating even more debris. “Even the small particle caused by the collision has enough power to blow up a satellite,” he said. “If we continue the chain reactions of the collisions, we won’t be able to put our space assets into space. So it’s now (that) we have to remove large objects from space.”

#### **Space exploration increases space debris**

Resilience 18’ – Resilience News, “Space debris poses growing threat to satellite infrastructure”, Global Resilience Institute, Northeastern University, January 16th, 2018, [https://globalresilience.northeastern.edu/space-debris-poses-growing-threat-to-satellite-infrastructure/] Accessed 01/05/22 AHS//AP

NASA and the Department of Defense Space Surveillance Network currently [track](https://www.nasa.gov/offices/nesc/articles/space-debris) about 21,000 pieces of debris in Low Earth and Geosynchronous Orbit, although the most dangerous pieces of debris are the millions that are too small to track. Multiple trends, including the growing usage of small satellites, the growth of private sector investment in space exploration, and the development of anti-satellite military technologies are fueling the growth of space debris. [Testing](http://www.esa.int/Our_Activities/Operations/Space_Debris/FAQ_Frequently_asked_questions) of anti-satellite missiles by China and the United States has resulted in thousands of new fragments in space due to the collision of missiles with target objects. Another major example of where this debris originates from was a collision between a communications satellite owned by the Iridium corporation and an abandoned Russian communication satellite, which resulted in 2,300 new pieces of shrapnel. The [development](https://www.wsj.com/articles/we-need-satellitesa-speeding-mass-of-space-junk-puts-them-at-risk-1505226427) of small and cheap satellites, such as the popular $40,000 4-inch CubeSAT, has led to the proliferation of satellites sent by students, companies, and researchers; SpaceX has taken advantage of this technology to request permission from the FCC to launch 12,000 small satellites into Low Earth Orbit. Long-term growth in space debris creates two major risks; first, that space debris could potentially create unusable regions of orbit due to pollution. Further, there is a growing risk of the [onset](https://www.wsj.com/articles/we-need-satellitesa-speeding-mass-of-space-junk-puts-them-at-risk-1505226427) of the Kessler Syndrome, which occurs when collisions continually create more debris which results in more collisions, creating a positive feedback loop and eventually resulting in new collisions even with no new launches in orbit.

#### Space debris damages lead to war and economic collapse

**Blatt 20 -** Talia M. Blatt, I am a rising sophomore at Harvard, considering a joint concentration in Social Studies and Integrative Biology with a citation in Chinese. I specialize in East Asian geopolitics and security issues, "Anti-Satellite Weapons and the Emerging Space Arms Race," Harvard International Review, May 26th, 2020, [https://hir.harvard.edu/anti-satellite-weapons-and-the-emerging-space-arms-race/] Accessed 12/12/21 recut AHS//AP

ASAT testing, rather than deployment, risks the exponential accumulation of debris, which endangers satellites and creates a host of other problems. KE-ASATs rely on smashing satellites into thousands of pieces, so each test adds tremendous amounts of space debris. The 2007 Chinese KE-ASAT test alone increased the number of objects in orbit by 20 percent, producing more than two thousand pieces of debris large enough to be tracked and likely thousands more too small to be counted that will remain in orbit for centuries. Even the smallest pieces of debris can do great damage; traveling at more than 15,000 miles per hour, they can crash into other debris in a proliferation known as the Kessler Syndrome. The situation in space could approach a critical mass in which collision cascading occurs even if all launches were halted, choking orbits with debris until all satellites are destroyed and spaceflight rendered impossible. Compared to the negligible debris created during commercial launches, ASAT tests—especially if the arms race continues to escalate and countries with less developed space programs join with cruder designs—may accelerate the debris in space closer and closer to this critical mass. If debris knocks out a satellite, an increasingly likely possibility in a world with ASAT tests, then the aforementioned conflict scenarios become more likely. Conflict aside, ASAT-based debris clouds are terrifying in their own right. Public health, transportation, climate science, and a litany of other crucial infrastructures are dependent on satellites that are now at risk. Satellite GPS is a cornerstone of the modern economy; some pundits believe that the slightest glitch in GPS satellites could shock the stock market and further destabilize an unstable global economy. During the pandemic, satellites are playing a crucial role in geospatial data collection for infectious disease modeling. Essentially, it is hard to imagine a world without satellites, but that is a possible outcome given that there are no reliable methods of withdrawing debris from space.

## C3: Space Bugs

**COVID has pushed hospital crowding to the brink.**

**Evans et al ’20:**Melanie Evans, Hospital Reporter for the Wall Street Journal, Joseph Walker, Reporter at the Wall Street Journal, Stephanie Armour, Wall Street Journal health care policy reporter, July 15 2020, “Hospitals in COVID-19 Hot Spots Are Filling Up; Patients stranded in emergency rooms, transferred between faciliites as surge in coronavirus cases pushes hospitals in Texas, Arizona, and Florida near capacity,” Wall Street Journal, <https://www.wsj.com/articles/hospitals-in-covid-19-hot-spots-are-filling-up-11594860223>, DOA 8-31-20 WKU TW

As the **pandemic pushes U.S. hospitals** in the South and West **near capacity**, the **urgent need for available beds** has **stranded patients** in emergency rooms, **scrambled ambulances and forced patients to relocate hundreds of miles to relieve overcrowded wards**. In Arizona, hospitals are using a statewide transfer center to move 30 to 50 patients between hospitals each day, according to the director of the state's Department of Health Services. In Florida, hospital giant HCA Healthcare Inc. isn't accepting patients transferred from other overflowing hospitals. In Houston, the daily hunt for empty beds has left critically ill patients to wait hours or days in emergency rooms for vacancies. A dozen Houston-area hospitals had a combined 273 patients holding in emergency rooms for an empty bed Tuesday, including about 40 in need of intensive care, said Darrell Pile, chief executive of the Southeast Texas Regional Advisory Council, which tracks bed availability and helps hospitals coordinate transfers. "This disaster beats all disasters," he said. **The sustained surge in hospitalizations** there and in other cities like Phoenix and Miami **is straining the response effort**, as the need for beds is running up against shortages of staff—and in some cases space. **Hospitalizations elsewhere in the U.S. have intensified demand for health-care workers**, he said. The public's noncompliance with mask or social-distancing guidelines further allows the virus to spread, he said. "What we're facing has gotten much worse than anyone ever imagined and much worse than anyone could ever prepare for," Mr. Pile said. "The public has to do its part." Hospitals in Arizona reported nearly 3,500 coronavirus patients Tuesday, a figure that has climbed steadily after the state reopened its economy and coronavirus cases surged. Texas in late June moved to scale back its reopening , halting some nonessential surgeries in certain counties and rolling back bar openings, as hospital intensive care units grew full. But occupancy rates continue to climb in Texas hot spots. The surge in patients and rising numbers of deaths in some U.S. communities follow the increase in cases that has happened alongside efforts to restart local economies. Across the U.S., more than 3.43 million people have been infected, and 136,466 have died, according to data compiled by Johns Hopkins University. States like Florida and Arizona have hit new highs in recent days, and now other states, including Tennessee, West Virginia, Oklahoma and South Carolina, have seen new coronavirus cases jump 20% or more from a week ago. A clear picture of hospital strain is limited, however, by uneven public reporting across states and hospitals and ad hoc efforts by federal officials to collect data since the pandemic began. Federal officials on a call with reporters Wednesday defended a decision to have hospitals report data on Covid-19 cases, critical supplies and staff to the U.S. Department of Health and Human Services rather than the Centers for Disease Control and Prevention. Critics fear the move would enable the Trump administration to politicize hospital virus data by impeding access to or sharing of information. "Rather than strengthening the public health data system to improve hospital reporting, the administration has chosen to hand data to an unproven, commercial entity, reporting to political appointees, not scientific experts," Dr. Tom Frieden, who ran the CDC during the Obama administration, tweeted Wednesday. The data collection will be overseen by a private contractor, TeleTracking. Michael Caputo, a spokesman for HHS, said the CDC system is no longer adequate for monitoring hospital information and that the agency can't keep up with the pandemic. CDC Director Robert Redfield told reporters Wednesday that no one is taking access or data away from CDC. He said the White House coronavirus task force had for months urged improvements. Hospital surge response differs across states, which have taken varied roles in tracking patient capacity and transfers. States also have taken mixed approaches to mandates to halt nonessential hospital services. In New York, where the pandemic overwhelmed hospitals early on, there were fewer than 1,000 coronavirus patients in hospitals Tuesday with roughly 12,700 available hospital beds. This is down from a high on April 12, when nearly 19,000 Covid-19 patients were hospitalized across the state and hospitals were ordered to increase their bed capacity by 50%. Hospitals saw revenue plunge as most halted some surgeries in late March and April, either voluntarily or under state orders, then rapidly ramped back up as states eased restrictions. Arizona requires hospitals that have capacity to accept patients from its state transfer coordination center, said Cara Christ, head of Arizona's Department of Health Services. That prevents any one hospital system from bearing a disproportionate share of the surge, she said. Some hospitals in the state have voluntarily halted nonessential surgery. The state requires hospitals to suspend the procedures when total occupancy levels exceed 80%, a spokeswoman said. In Florida, HCA Healthcare said last week it would limit scheduled surgeries and cancel those that could safely be postponed. To preserve hospital capacity in Texas, Gov. Greg Abbott in late June halted surgery across four counties, including Harris County, which is home to Houston. Since then, **intensive-care occupancy** across the county's hospitals has **increased to 98% from 92%,** SETRAC data show. Mr. Abbott later expanded the number of counties subject to the order. More on Covid-19 Hospitalizations **Creating more intensive-care beds will be challenging with acute staffing challenges,** Mr. Pile said**. "This virus has gone on so long and has consumed staff from all parts of the state,"** Mr. Pile said. "There are no longer enough staff to put a patient in all of those beds." Memorial Hermann Health System continued to add beds with its Houston-area hospitals near capacity, a spokeswoman said. It has received 60 nurses deployed by the state to provide relief and hired additional staff through temporary agencies. The Texas Department of State Health Services as of July 8 had sent roughly 1,200 health-care workers to hospitals and had another 576 on standby, said agency spokesman Chris Van Deusen. Some hospitals say they can't add any more beds. Harris Health System, which operates two public hospitals in Houston, is at its maximum, said Charlie McMurray-Horton, its associate administrator for clinical integration and transformation. Harris's hospitals have struggled to find empty beds elsewhere for 10 to 30 patients who need transfers each day. That has **left some patients stranded in the emergency room** until a vacancy appears and **forced** its **hospitals** **to** **turn** **away** **ambulances**. More capacity for Harris Health's hospitals depends on other Houston-area hospitals adding beds to accept more transfers, Ms. McMurray-Horton said. "We are intertwined," she said. "Wherever there is an increase in beds, it helps out the community."

#### **Spaceflight activates disease and increases spread**

Frontiers 19’ - Frontiers. "Dormant viruses activate during spaceflight: The stress of spaceflight gives viruses a holiday from immune surveillance, putting future deep-space missions in jeopardy." ScienceDaily. [www.sciencedaily.com/releases/2019/03/190316162211.htm] (Accessed January 3, 2022).

"During spaceflight there is a rise in secretion of stress hormones like cortisol and adrenaline, which are known to suppress the immune system. In keeping with this, we find that astronaut's immune cells -- particularly those that normally suppress and eliminate viruses -- become less effective during spaceflight and sometimes for up to 60 days after." In the midst of this stress-induced amnesty on viral killing, dormant viruses reactivate and resurface. "To date, 47 out of 89 (53%) astronauts on short space shuttle flights, and 14 out of 23 (61%) on longer ISS missions shed herpes viruses in their saliva or urine samples," reports Mehta. "These frequencies -- as well as the quantity -- of viral shedding are markedly higher than in samples from before or after flight, or from matched healthy controls." Overall, four of the eight known human herpes viruses were detected. These include the varieties responsible for oral and genital herpes (HSV), chickenpox and shingles (VZV) -- which remain lifelong in our nerve cells -- as well as CMV and EBV, which take permanent but uneventful residence in our immune cells during childhood. CMV and EBV, are two viruses associated with causing different strains of mononucleosis or the "kissing disease."… continued virus shedding post flight could endanger immunocompromised or uninfected contacts on Earth, like newborns. "Infectious VZV and CMV were shed in body fluids up to 30 days following return from the International Space Station." What's more, as we prepare for human deep-space missions beyond the moon and Mars, the risk that herpes virus reactivation poses to astronauts and their contacts could become more crucial. "The magnitude, frequency and duration of viral shedding all increase with length of spaceflight." Developing countermeasures to viral reactivation is essential to the success of these deep-space missions, argues Mehta.

#### Interplanetary contamination risks humanity

Ratner 16’ – Paul Ratner, Paul is a writer, filmmaker, and educator. He has written for years for Big Think and other outlets on transformative scientific research, history, and current events. His award-winning films like the true-life adventure ["Moses on the Mesa"](http://mosesonthemesa.com/) and the science documentary ["The Caveman of Atomic City"](http://micromikefilm.com/) have played at film festivals around the world. Paul also organizes numerous unique educational events, renowned film festivals, and competitions for thousands of people. He has degrees from Cornell University (BA) and Chapman University (MFA), “Humanity Vs Aliens: They Could Wipe Us out with Diseases”, BigThink, April 8th, 2016, [https://bigthink.com/health/could-alien-diseases-wipe-out-humanity/] Accessed 01/04/2021 AHS//AP

But with every scoop of extraterrestrial soil our rovers dig up, come some fears.  The scoop could contain alien bacteria that might thrive here on earth in ways that are unexpected, unknown and possibly very deadly. We could potentially have no immunity to extraterrestrial microbes. They could quickly wipe out large chunks of the human population, like a modern-day Black Plague. And that’s not the only threat.  Such bacteria could go after animals, plants and earthly microbes. Our food sources could be gone before we do. The encounter between us and aliens or alien bacteria could be similar to [what happened to Native Americans when Europeans arrived in the 15th century](http://bigthink.com/paul-ratner/devastating-new-evidence-of-how-early-native-americans-were-brought-to-extinction-by-europeans). Over 95% of possibly 54 million people were killed due to lack of immunity to such illnesses as smallpox and flu. NASA and other space agencies [instituted decontamination programs](http://www.space.com/27599-ebola-outbreak-mars-sample-lessons.html) to make sure the samples are quarantined. The international Outer Space Treaty of 1967 states in its article IX that “States Parties to the Treaty shall pursue studies of outer space, including the Moon and other celestial bodies, and conduct exploration of them so as to avoid their harmful contamination and also adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter and, where necessary, shall adopt appropriate measures for this purpose.” But back contamination practices like quarantines and all types of sterilizations have their own limitations, as what they are looking for is limited to what we know to look for. An unknown life form would behave unknowingly.