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**Space is the new ground for settler expansion – representations and discourses surrounding space appropriation perpetuates colonial violence**

**Smiles 20,** Deondre Smiles, 10-26-2020, "The Settler Logics of (Outer) Space," Society + Space, <https://www.societyandspace.org/articles/the-settler-logics-of-outer-space> [Dondre Smiles is an Indigenous geographer whose research interests lie at the intersection of several fields, including critical Indigenous geographies, human-environment interactions, political ecology, tribal cultural resource preservation, and science and technology studies. Their current academic position is as an Assistant Professor in the Department of Geography at the University of Victoria, in B.C., Canada.] //tanya

To most scholars, and certainly to the virtual majority of Indigenous peoples on Turtle Island, it is no secret that the country we call the United States of America was built upon the brutal subjugation of Indigenous people and Indigenous lands. Fueled by the American settler myths of terra nullius (no man’s land) and Manifest Destiny, the American settler state proceeded upon a project of cultural and physical genocide, with lasting effects that endure to the present day. The ‘settler myth’ permeates American culture. Words such as ‘pioneer’, the ‘West’, ‘Manifest Destiny’ grab the imagination as connected to the growth of the country in its early history. America sprang forth from a vast open ‘wilderness’. Of course, for Indigenous people, we know differently—these lands had complex cultural frameworks and political entities long before colonization. Words like ‘pioneer’ and ‘Manifest Destiny’, have deep meanings for us too, as they are indicative of the very real damage dealt against our cultures and nations, damage that we have had to work very hard to undo. Trump’s address raises key insights into the continuing logics of settler colonialism, as well as questions of its future trajectories. Trump’s invocation of ideas such as the ‘frontier’ and ‘taming the wilderness’ draws attention to the brutal violence that accompanied the building of the American state. Scholars such as Greg Grandin (2019) make the case that the frontier is part of what America is—whether it is the ‘Wild West’, or the U.S.-Mexican border, America is always contending with a frontier that must be defined.  **Language surrounding ‘frontier’ is troubling because it perpetuates the rationale of why the American settler state even exists—it could make better use of the land than Native people would, after all, they lived in wilderness**. This myth tells us that what we know as **the modern world was built through the hard work of European settlers; Indigenous people had nothing to offer or contribute**. For someone like Mr. Trump, whose misgivings and hostility towards Native people have been historically documented, this myth fits well with his narrative as President—he is building a ‘new’ America, one that will return to its place of power and influence. The fact **that similar language is being used around the potential of American power being extended to space** could reasonably be expected, given the economic and military potential that comes from such a move. **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 does not exist in a vacuum, 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. 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.) 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 r**es 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:  One scientist told me that astronomy is [as] a “benign science” because it is based on observation, and that it is universally beneficial because it offers “basic human knowledge” that everyone should know “like human anatomy.” Such a statement **underscores the cultural bias within conventional notions of what constitutes the “human” and “knowledge.”** In the absence of a critical self-reflection on this inherent ethnocentrism, the tacit claim to universal truth reproduces the cultural supremacy of Western science as self-evident. Here, the needs of astronomers for tall peaks in remote locations supplant the needs of Indigenous communities on whose ancestral territories these observatories are built (2017: 8). 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. Such contestations over outer space and ethical engagement with previously unknown spaces will continue to happen. Outer space is not the first ‘final frontier’ (apologies to Gene Roddenberry) that has been discussed in settler logics and academic spaces. In terms of settler colonialism, scholars have written about how Antarctica was initially thought of as the ‘perfect’ settler colony—land that could be had without the messy business of pushing Indigenous people off of it (see Howkins 2010). Of course, we know now that engagement with Antarctica should be constrained by ecological concern—who is to say that these concerns will be heeded in ‘unpopulated’ space? What can be done to push back against these settler logics? I want to now turn our attention towards the possibilities that exist regarding Indigenous engagement with outer space.  After all, the timing could not be more urgent to do so—we are now at a point where after generations and generations of building the myth that America was built out of nothing, we are now ready to resume the project of extending the reach of American military and economic might in space. To be fair, there are plenty of advances that can be made scientifically with a renewed focus on space exploration. However, history shows us that space exploration has been historically tied to military hegemony, and there is nothing in Mr. Trump’s temperament or attitude towards a re-engagement with space that suggest that his push toward the stars will be anything different. A sustained conversation needs to be had—will this exploration be ethical and beneficial to all Americans?

**The private sector’s promise of “future benefits” creates a form of disimagination that centers the white settler narrative while erasing indigenous communities’ narratives**

nse=new space economy (in the context of priv industries)

**Jones 21**, Craig Henry Jones, 5-24-2021, "Enclosing the Cosmos: Privatising Outer Space and Voices of Resistance," No Publication, <https://www.societyandspace.org/articles/enclosing-the-cosmos-privatising-outer-space-and-voices-of-resistance> //tanya

The past decade has seen **an increasing involvement from the private sector in all aspects of Outer Space operations** – ranging from launch capacities to satellite capabilities, and recently expanding to include manned space launches (Grady, 2017: Luscombe and Sample, 2020). Taken collectively, these private-sector activities comprise the New Space Economy (NSE). The NSE is not limited to current operations; various actors are advocating for a privatised extractive industry to be developed, specifically around **asteroid mining** (BBC News, 2012: Johnson et al., 2014: Rincon, 2013). These actors are seeking to legitimise asteroid mining efforts not only through the physical and legislative enclosure of Outer Space but through the enclosure of imaginative spaces also. Whilst asteroid mining was touted in the late 1970s and 1980s (McCurdy, 2011), it has returned with increased enthusiasm and traction; several asteroid mining companies having been founded since 2012 [1]. Advocates of asteroid mining offer a variety of justifications for their proposed endeavours, ranging from an environmental impetus due to climate change (Johnson et al., 2014) to the ability of asteroid materials to be used as spatial extension resources [2]. The primary impetus, however, is the industry’s estimated value. The resources asteroid mining companies seek to extract – broadly grouped as water, industrial metals, platinum group elements, and volatiles – are typically discussed in the trillions and quintillions (see Desjardins, 2016 for some discussion and infographics). However, despite the enthusiasm of asteroid mining advocates, the proposed extractive industry is not unproblematic. Whilst the narratives surrounding asteroid mining frame this industry’s future as something certain – discussed in advertising material, websites, and NSE circles in the affirmative – there are still many unanswered questions. Aside from issues of technological and fiscal viability, **uncertainty remains surrounding ownership, land rights, and whose future this industry speaks of, for, and mobilises**. Due to such uncertainties, actors with vested interests are seeking to enclose the Global Common of Outer Space, ‘opening’ the ‘final frontier’ to what some commentators are referring to as a modern Gold Rush (Cofield, 2016: Elvis and Milligan, 2019: Pandya, 2019). This pursual of enclosure relies – broadly speaking – on the same underlying principle(s) as the enclosure of commons historically and lobbying efforts have resulted in these arguments appearing in legislation in several countries [3]. These **manoeuvres to privatise Outer Space rely not only on the enclosure of physical and legislative places but also seek to enclose imaginative spaces through the process(es) of disimagination**. Broadly conceived, **disimagination is a process that curtails our ability to think critically and imagine new futures through cultural apparatuses and public pedagogies designed to erase the multiplicity of historical realities that deviate from the hegemonic ‘norm’** (Didi-Huberman, 2008: Giroux, 2014). Whilst this concept has been used in Didi-Huberman’s discussion of the destruction of concentration camp materials and Giroux’s work on critical pedagogy and civic rights, the process of disimagination is operating within and upon discourses of Outer Space, as I discuss later in this piece. The following discusses enclosure, disimagination, and Ethnofuturism to problematise these futures of asteroid mining: highlighting how popular **NSE discourses draw upon a Eurocentric rendition of a ‘Grand Historical Narrative’**. Through this, we may begin to challenge the totalising concept of ‘humanity’ [4] oft-invoked by asteroid mining advocates and turn a more critical lens to these purported futures and the discourses (re)created to justify them.‍ Along with increasing interest from **private actors**, discussions surrounding the enclosure of Outer Space – and asteroid mining more specifically – has seen growing coverage in recent years, several countries having passed legislation to begin legalising and encouraging extraterrestrial extractivism [5]. Manoeuvres to enclose the extraterrestrial common and begin mining operations necessitate the establishment of a rights regime to ensure any disputes over access and ownership can be resolved. This opens a regulatory ‘frontier’ through which issues of land tenure and ownership can be thrashed out, taking on significance through its ability to greatly influence influxes of capital into these operations and mineralogical deposits (Bridge, 2004). Through the regulatory enclosure of Outer Space, a regime of exclusion can be implemented whereby (il)legitimate forms of use and abuse can be differentiated and associated boundaries inscribed through physical and discursive means (Li, 2014: Steinberg, 2018). Private NSE actors have sought to influence these legislative processes through lobbying, advertising materials, press conferences, business forums, and public and private talks. This has culminated in a process of enclosure wherein similar justifications to past enclosures are mobilised and reanimated. Once more, ‘**production’ and the ability to ‘work’ a resource are becoming the modus operandi through which ownership over the common is being exerted** (Wood, 2017), finding explicit articulation in the US SPACE Act 2015. The mobilisation and perpetuation of this discourse is coupled with the perversion of the common heritage principle. To refrain from extracting minerals throughout Outer Space is to (supposedly) ‘waste’ their potential and deprive future generations of the benefits this industry purports to provide (Steinberg, 2018). The process of [this] **disimagination selectively edits the historical narrative, removing certain voices, modes of resistance, and alternative accounts, distorting the ability to imagine futures outside of the EuroAmerican neoliberal present** [6] (Didi-Huberman, 2008: Giroux, 2014). It is through the processes of disimagination that the condition of capitalist realism is enabled – a state of affairs wherein it is easier to imagine the end of the world than the end of capitalism (Fisher, 2009 [7]). Consequently, **the futures curated, maintained, and promoted by NSE actors are structured through a white-ethnocentric rendition of history**. The resultant imaginaries and narratives implicitly **and explicitly draw upon familiar tropes of white settler colonialism**, such as enclosure, working land to produce ‘value’, and the displacing of indigenous/non-Western onto-epistemological frameworks, if not the people themselves [8] (Bhabha and Comaroff, 2002: Hesse, 2002: Loomba et al., 2005: Parry, 2002: Wilkes and Hird, 2019: Wood, 2017: Young, 2001). Through imbibing popular discourses of Outer Space futurity with this history, similar arguments to past enclosures are made. Specifically, that ‘production’ and the ability to ‘work’ a resource operates as the basis through which ownership may be exerted [9]; extractive industries not taking anything away but adding something, and issues coming to centre upon not occupancy or fruitful use but relative value (Wood, 2017). ‍

**Private entities deployment of satellites creates megaconstellations – a form of cultural genocide**

**Ferreira 21**, Becky Ferreira, 10-5-2021, "SpaceX’s Satellite Megaconstellations Are Astrocolonialism, Indigenous Advocates Say,", Vice, <https://www.vice.com/en/article/k78mnz/spacexs-satellite-megaconstellations-are-astrocolonialism-indigenous-advocates-say> //tanya

**Satellite companies** such as **SpaceX and Amazon** aim to provide global broadband, but their **networks threaten dark skies and Indigenous traditions that depend on them**. Every time you go outside on a clear night to gaze at the constellations strewn across the sky, you are continuing a human tradition that reaches deep into the shadows of our prehistory. Across cultures and continents, our ancestors have looked to the night sky for purpose, connection, and stories that they imagined were painted across a star-studded canvas. This ancient practice has now reached a critical inflection point as a new group of constellations, created by humans, is suddenly appearing in space. These “**megaconstellations''** **consist of satellites, deployed by companies such as SpaceX,** that range in number from a few hundred to several thousand. All told, Earth orbit [may contain 100,000 operational satellites](https://www.theverge.com/2020/8/26/21401455/satellite-mega-constellations-astronomy-spacex-amazon-oneweb-bright-internet-space) by 2030, roughly 25 times the existing population. **Indigenous communities are disproportionately affected** by this interference with the night sky, **which falls under a broader pattern of astrocolonialism**. Light pollution is [considered by some experts](https://arxiv.org/abs/2001.11527) to be **a form of cultural genocide against Indigenous peoples**, whose traditions have already experienced erasure across countless other spheres. “The concern I feel regarding megaconstellations is the same concern I feel when I see my country on fire or hear of my neighbors in the Torres Straits and their struggles with rising sea levels due to climate change,” Karlie Alinta Noon, a Gomeroi woman as well as an Indigenous research associate and PhD student in astronomy at the Australian National University, said in an email. “The injection of thousands of metallic, highly reflective objects into our atmosphere is kindred to environmental degradation because it is changing our sky and we don’t yet know if we can reverse it,” she added. “**Indigenous ways of knowing are based upon connections to the land and sky,**” Jennifer Howse, a member of the Métis Nation of Alberta Region 3 and an education specialist at the University of Calgary’s Rothney Astrophysical Observatory, said in an email. “Elders share and teach spiritual and scientific traditional knowledge by using these connections to the natural world,” she continued. “Teaching the motion and meaning of stars, planets, and the Moon in the night sky is lost when the younger generation cannot see the stars. The glow of artificial light challenges and limits discovery, teaching, and our ability to find ourselves in the universe.”  “**It’s not even marginalization** that’s an issue—**it’s erasure**.” These constellations are far better known today as the Pleiades, the Southern Cross, and Orion’s Belt, which goes to show that astrocolonialism predates the space age by generations. Most internationally recognized constellations derive from Greek mythology, a standard pantheon that is resonant to many cultures, but that has also whitewashed the nomenclature of the skies.  “We have official constellations that are quite arbitrary, based on some discussion by essentially a few white guys a century ago, whereas we ignore the constellations of various Indigenous peoples even if we're on those peoples’ lands,” Hilding Neilson, a Mi’kmaw person and an interdisciplinary astronomer at the University of Toronto, said in a call. “It’s not even marginalization that’s an issue—it’s erasure.” “If you open a general astronomy textbook that is 500 pages, you might have one or two pages that say something on Indigenous astronomy, and it usually relates to it being ancient, historical, and gone,” he added. “It creates this snowball effect of **dismissiveness and denial of these knowledges as scientific, as logical, and as an understanding of the natural world.**” **Huge networks of orbital spacecraft are** seen by some as **a continuation of this erasure**. Though skywatchers have spotted artificial objects since the dawn of the space age, the sheer glut of new satellites is dramatically changing the earthbound view of the universe experienced by innumerable generations. With **little regulation to prevent the deployment of megaconstellations**, a new takeover of space currently seems like a foregone conclusion, in spite of its huge implications for the night sky. “We're just running these cycles all over again,” Jeff Doctor, who is Cayuga from Six Nations of the Grand River Territory and an impact strategist for the Indigenous digital agency [Animikii](https://www.animikii.com/news/digital-divide-spacex-starlink-and-the-indigenous-spaces-between), said in a call. “Tech culture has to think in terms of history, place, lands, people—all of these kinds of things—and it just doesn't.” In [a 2020 article](https://www.nature.com/articles/s41550-020-01238-3) in Nature Astronomy, Venkatesan and her colleagues warned that **the rapid deployment of satellites stands to magnify “the wounding and long-term consequences'' of imperial colonizing policies on Earth “on a cosmic scale.”** To counter the acceleration of astrocolonialism, the article calls for a relational **reframing of space** as “an ancestral global commons that contains the heritage and future of humanity’s scientific and cultural practice.”  “We need a mindset shift,” Venkatesan said in a call. “That might take a generation, but we need to start working away at it, and we need to start where things are now. In a legal sense, it would be nice to view space as a shared commons that we are all respectfully dialoguing about, but we're not there.”  Today, **SpaceX** occupies the center of the conversation about megaconstellations because the company has already deployed [more than 1,700 satellites](https://www.cnbc.com/2021/08/19/spacex-starlink-satellite-internet-new-capabilities-starship-launch.html#:~:text=SpaceX%20has%20launched%201%2C740%20Starlink,nearly%2030%2C000%20satellites%20in%20total.) into low-Earth orbit as part of its Starlink network, which may eventually include some 30,000 spacecraft. OneWeb, a U.K.-based company, has [launched about half](https://spacenews.com/onewebs-broadband-constellation-reaching-halfway-mark/) of its constellation of 648 satellites, and Amazon is gearing up to [launch its own network](https://www.reuters.com/lifestyle/science/amazon-secures-ulas-satellite-launch-vehicles-project-kuiper-2021-04-19/), Project Kuiper, containing more than 3,000 satellites. Meanwhile, China is developing [a state-owned constellation](https://spacenews.com/china-is-developing-plans-for-a-13000-satellite-communications-megaconstellation/) called GW that may consist of some 13,000 satellites.  As soon as SpaceX’s satellite strings started streaking across the night sky, astronomers and astrophotographers [complained about getting](https://www.vice.com/en/article/ep45ym/spacex-starlink-satellites-keep-photobombing-the-neowise-comet) “Starlinked.” Megaconstellations are an emerging thorn in the side of ground-based astronomy, especially telescopes that rely on wide-field observations, such as the next-generation Vera Rubin Observatory in Chile. “This is going to erase the Milky Way for a lot of people,” said Venkatesan, who will be [the keynote speaker](https://www.darksky.org/aparna-venkatesan-to-present-keynote-at-2021-under-one-sky-conference/) at the International Dark-Sky Association’s Under One Sky Conference in November, where she will address the impact of megaconstellations on dark skies and marginalized communities, including Indigenous peoples. In addition to the implications for stargazers, satellite trails and skyglow will obscure the interstitial darkness of the night sky, which is important for Indigenous traditions. In Australia, for instance, constellations [such as the Celestial Emu](https://www.youtube.com/watch?v=mYr7ZCn04eA) are formed from dark patches in space. “With the increase in light pollution due to these reflective objects in space, we [they] can no longer access these dark constellations,” she added. “That means we can no longer monitor our cultural signals that tell us about the seasons or ceremony timing, or even access our knowledge, as much of it is stored in the sky. **If we cannot access our skies, we cannot practice our culture**.” The companies launching these satellites obviously don’t want to be slowed down by new regulations or opposition, but some are open to feedback from dark sky advocates and Indigenous communities. “Each tribe is sovereign and they have the right to self-determine, which means they decide what their community will do,” Chavez said in a call. “Broadband is critical,” he continued. “The pandemic has highlighted the acute need for it in telehealth, education, and transportation.”  But Chavez said in conversations around internet coverage and regulations of space, **Indigenous peoples have been left out**: “The issue is—and this is not my problem to solve—we were not at the table when the resource was handed out. That is really the challenge.” To confront this challenge, Indigenous peoples must be at the center of discussions, and ultimately legal actions, about developments that so profoundly affect them. One possible model to follow, to that end, might be [New Zealand’s Te Urewera Act 2014](https://www.legislation.govt.nz/act/public/2014/0051/latest/whole.html), which merges common law and Māori cosmology by conferring personhood to a national park. Likewise, Neilson urged the Canadian Space Agency (CSA) to be much more inclusive of Indigenous communities and worldviews regarding space issues in a recent paper he co-authored with Elena Ćirković, a researcher at the Helsinki Institute of Sustainability Science. The authors argue that satellite constellations are “a form of colonization” and that the CSA “has an obligation to consult with Indigenous communities and Indigenous-led organizations with respect to the legalities of how satellites that impact communities operate,” according to the paper, [published this summer on the preprint server](https://arxiv.org/abs/2104.07118) arXiv. “We talk about treaties as being around land claims,” Neilson said, “but at what height does the treaty end and the United Nations takes over—or nothing takes over? There's an ethical issue for consultation and consideration that's necessary with Indigenous communities, as to what they want and what impacts their land rights.” **It is also essential that Indigenous communities be engaged early and often on space issues and their consequences**, as opposed to relying on an old and insulting pattern of seeking superficial sign-offs after decisions have already effectively been made. The utopian vision of global satellite broadband extends opportunities to Indigenous peoples who want them, but it **glosses over the marginalization of traditions that have been observed for countless generations**. Moreover, paternalistic rhetoric often frames Indigenous communities as what Doctor calls “a branding exercise” in corporate social responsibility. “This notion that providing access, and assuming everybody will have access, as good corporate internet citizens also detracts from Indigenous folks’ ability to live in their traditional ways: living on the land, not having to depend on the internet, not having to depend on neoliberal economies, and not having to have a job,” he said. “It raises an interesting conundrum where there's already this baseline assumption that everyone must have a job, be a good corporate citizen, and participate,” Doctor continued. “**If you don't do that, you’re** now a deviant or **an other**, which is the classic colonial narrative all the way down to the fur trade.” “There is a race here that falls within a capitalist framework where if you have satellites up there first, you get to control the market, so putting caps on the market is very important here as well,” Neilson said. “While satellite internet is going to be valuable for some communities, it's also not clear that it's actually going to be affordable for these communities.” Polluting outer space in exchange for a mirage of affordable broadband would be a truly tragic devil’s bargain. But for some, even the most idealistic promises of worldwide internet access would not be worth the loss of dark nightscapes and the Indigenous traditions that depend on them. "**The potential benefits of this new infrastructure do not outweigh the negatives**,” Noon said. “Further, **no permission was given for our  skies to be taken**. The Indigenous people of Australia own the sky as much as these companies, and yet their desires were not considered.”  “We already had the infrastructure to improve the internet in remote locations,” she noted. “We didn’t have to destroy the skies to do it. There could have been room for compromise but I don’t think this situation is about doing what’s right or what’s best: it’s a lands race." At a moment when it is common to hear Indigenous land acknowledgements at public events, it is past time to extend those sentiments skyward, **to this new form of astrocolonialism embodied by megaconstellations.**  For Chavez, who was profoundly shaped by his grandfather’s immense knowledge of the stars, the ominous brightening of the night sky is especially personal. Growing up, he recalls his peers dismissing his grandfather’s talents as mysticism or outright fabrication, leaving him with a sense of **alienation and self-doubt**.  “It made me truly feel like I didn't belong here [in the U.S.], and that my ways were lies and not truths, so that hurt for many years,” Chavez said. “But I came to realize that my grandfather, and our traditional ways, were so sophisticated that Western science didn't understand it. We could use different terms, but my grandfather was essentially a physicist. He could look at the stars, and he could guide us in the desert at night to collect food.” “The luminosity [from artificial light] breaks this one-way channel that we have with the stars and changes our relationship with the stars,” he concluded. “While I may have that knowledge, **what about the next generation, when they see all of these different lights in between this sacred knowledge that we have known since time immemorial? We will be assimilated even more, and we will lose this one-way relationship with Father Sky. That is a very difficult thing to accept.”**

**The settler vision of space colonization fetishizes the extraction of outer space and extends the subject-object relationship now and into the future**

**Sammler and Lynch 19**, Katherine G Sammler, Casey R Lynch, California State University Maritime, University Of Nevada, USA, 9-2-2021, "Apparatuses of observation and occupation: Settler colonialism and space science in Hawai'i," SAGE Journals, <https://journals.sagepub.com/doi/full/10.1177/02637758211042374> //tanya

While other imaginaries are possible (Sammler and Lynch, 2019), this paper demonstrates how Western space science projects are inextricably entangled in the imaginaries and practices of settler colonialism (Prescod-Weinstein, 2020; Smiles, 2020). We refer to offworld colonies not to reproduce this imaginary but to recognize that this is **the project being carried out by** both traditional public space agencies like NASA and emerging **private space industries**. The paper examines HI-SEAS and TMT to consider the complex imbrications between historical, ongoing, and projected future settler colonialism and ideologies 946 EPD: Society and Space 39(5) and practices of Western space science. HI-SEAS and TMT seemingly represent very different projects. While TMT defenders describe the telescope as a passive and innocuous piece of infrastructure used to produce “universal” knowledge, HI-SEAS presents a more active form of exploration towards offworld colonization. Yet, examining the two projects in relation, we show how both **rely on logics of colonial totality** (Matson and Nunn, 2017), **the existing material relations of the colony, and the erasure of lived Native peoples and places** (Hobart, 2019), while enacting distinct yet co-dependent subject positions key to the projection of settler colonialism across space and time. TMT and HI-SEAS, respectively, enact the disembodied god’s-eye-view of Enlightenment science and the idealized Enlightenment subject-body of the colonizer. While we are not the first to recognize the co-constitution of observation and occupation, by highlighting this relationship in TMT and HI-SEAS, we set up a critical dialog between Indigenous and anti-colonial critiques and interdisciplinary literature on social studies of outer space (SSOS). SSOS literature explores how socio-technical projects of visualization produce astronomical knowledge (Vertesi, 2015); how space agencies simulate Moon and Mars with earthly analogs (Olson, 2018) superimposing spaces onto one another (Messeri, 2016); and how offplanet activities reshape geopolitics, environmental politics, and resource economies (Dunnett et al., 2019; Klinger, 2021). Others examine space science infrastructures as projects of state-building, displacement, and development in colonial contexts (Mitchell, 2018;Redfield, 2002). While many of these authors recognize that **offworld activities are within colonial imaginaries and practices**, anti-colonial critiques are not often made explicit, focusing instead on the perspectives and actions of scientists and engineers (Messeri, 2016). In contrast, Indigenous and allied critical scholars offer analyses of spatial and temporal logics of settler colonialism as manifested through space science infrastructures and their related imaginaries (Maile, 2015; Matson and Nunn, 2017; Smiles, 2020). For TMT, scholars examine the multiple practices, logics, and institutions of Western space science that have worked to lay claim to Native Hawai’ian lands. Hobart (2019: 42), for instance, examines how TMT has been justified through narratives that reframe Maunakea within imaginaries of scientific progress in which the site “transcend[s] international politics in the name of the greater good of humanity” as part of a longer historical trajectory of discursively emptying or “deanimating” landscapes. Goodyear-Ka‘opua argues that settler tem- porality reserves modernity and futurity for colonial projects and relegates Indigeneity to a premodern past, but that TMT activists “enact Indigenous futurities and open space to transform present settler colonial conditions” (2017: 185). Casumbal-Salazar makes clear that TMT controversies cannot be understood without explicitly questioning settler colonialism, writing: How are we to understand the controversy over Mauna a Wakea and the TMT if we fail to identify or accept the context in which this battle is being waged; if we fail to critically analyze settler-colonization under U.S. occupation? (2017: 24) Unseating the purported universality and objectivity of space science projects requires categorical anti-colonial analyses. We argue that Barad’s (2007) theorization of the apparatus is useful for bridging SSOS and anti-colonial scholarship because it traces techno-scientific production as part of broader apparatuses extending spatially and temporally from what is traditionally understood as the sites and moments of scientific practice. Through the apparatus, we show how projects of scientific observation and colonial occupation are co-constituted through the Sammler and Lynch 947 **production and maintenance of space science infrastructures on colonized lands**. In turn, we consider how these infrastructures reproduce the **subject–object relations** key to settler colonial projects – the view-from-nowhere (or Archimedean point) and embodied colonizer subjectivities. Observation is never a passive enterprise; rather, observation-occupation is active and employs apparatuses to iteratively enact differences between subject and object, colonizer and colonized. Since Cook’s expeditions, the West has subjected the constellation of Pacific Islands to a multitude of science experiments (DeLoughrey, 2012; Farbotko, 2010). Salmond (2003: ix) explains how **“[a]s the edges of the known world were pushed out, wild nature – including the ‘savages’ and ‘barbarians’ at the margins of humanity - was brought under the calm, controlling gaze of Enlightenment science, long before colonial domination was attempted**.” 948 EPD: Society and Space 39(5) There is a long history of the liveliness of islands being abstracted by colonial powers and scientists alike, from seemingly innocuous use of the Gala´pagos as discrete microcosms for theorizing evolution (Matsuda, 2006); to the United States’ devastating testing of nuclear weapons on the Marshall Islands; to botany’s role in the colonization of Hawai’i and its extension into contemporary experiments with genetically-modified organisms replacing native plant species (Goldberg-Hiller and Silva, 2015). As with other landscapes, specific imaginaries of place play a unique role in colonial practices on islands. Continental views of islands align with Enlightenment scientific desire for blank slates, perfect laboratories (Greenhough, 2006; Matsuda, 2007). **Mobilizing imaginaries of frontier and isolation, representations of islands within a continental and colonial gaze are, as Matsuda explains, “distant, isolated, uninhabited, and abstract spaces”** (2007: 230). The purported distance of the island colony enacts a separation between colonizer and colonized landscape that allows for specific relations and forms of observation. Islands become simplified models of a complex world, acting as “quintessential sites for experimentation” (Baldacchino, 2007: 165) **based on fetishized assumptions** about island spatiality. Scientists use islands to isolate variables and substitute space for time to construct linear timestreams. Islandness functions as stand-in for a computational time-step within an experimental design. These purported blank slates endow the initial time-step essential to modelling. Islands and their peoples have been employed to examine theories of geological, biological, human, and socio-cultural evolution. DeLoughrey describes how island spatiality is considered bound by “the theme of isolation, a model that had been deployed in the 19th century to propose the theory of evolution, and which re-energized the longstanding colonial understanding of the island as a laboratory” (2012: 168). The expansion of U.S. empire specifically enrolled island colonies from Puerto Rico to the Philippines as sites for grisly experimentations, from weapons to biomedical research on non-white bodies who were seen as relics of earlier stages of evolution (Immerwahr, 2019). Just as islands and their peoples have been used to model past evolutions, they are also established as models for specific futures. Baldacchino describes islands as sites of novelty; they tend toward clairvoyance; they are disposed to act as advance indicators or extreme reproductions of what is present or future elsewhere ... with fallacious simplicity, [they] can be conceived as a convenient platform for any whim or fancy. (2007: 165) Islands have emplaced visions of future climate dystopias (Farbotko, 2010) and imagined libertarian capitalist utopias (Lynch, 2017). **The continuation of these projects of empire and white supremacy are shaping plans for human colonization of Moon and Mars**. Such projects re-articulate debates around questions of race, ability, eugenics, reproduction, and human psychology in journals like Futures – including a 2019 special issue on ethics in offworld colonization. Through these projects, **islands and peoples are erased and overwritten by the totality of the model world they represent**. As DeLoughrey explains, “Western colonizers had long configured tropical islands into the contained spaces of a laboratory, which is to say a suppression of island history and Indigenous presence” (2012: 172). An affective landscape of history, more-than-human relationality (Watts, 2013), and lived social place gets transformed into independent, sterile variables instrumentalized in the projection of specific futures. **Such discourses intersect with space science imaginaries of exploration, exoticism, and otherworldliness**. Allen examines how U.S. empire depends upon three notions of time: a romanticized historical time recounting myth of the nation’s founding, the geological time of natural history, and the mechanized time of the clock and apparatuses of measurement. The **organization and control over these three temporalities constitutes a colonial totality** (Matson and Nunn, 2017) that works to settle time as much as space in the projection of settler futures. In dominant discourses, Indigenous time is linked to the past, with the present constituted on assimilation and the future on complete erasure (Rifkin, 2017). **The existence of contemporary Indigenous peoples poses a challenge to ongoing settler colonial hegemony.** Goodyear-Ka‘opua explains how “**settler state officials cast the kia ʻi [land protectors, caretakers] as impediments on the road to ‘progress’ (aka settler futurity) ... (mis)representing us as fixed in place, pinned in a remote time”** (2017: 191–192). Enlightenment notions of universality **erase** difference and thus **Indigenous claims to prior rights or sovereignty**. While these conceptions of time have long been critiqued, they **continue to shape the central logics of contemporary Western science, including space science.** While notions of linear, progressive time are used to justify settler colonial projects, the **relative and contingent relationships among space, time, and matter complicate claims to universality**. Time, like space, is subject to practices of organization and control that produce subject–object relations key to the Western colonial project. For instance, geologic time, or what Allen refers to as “vertical time,” is the spatial-temporal imaginary of geologic strata. He describes that, while “history often depicted time advancing horizontally across space, the geological revolution made it possible to imagine time extending perpendicularly into the territory beneath the nation” (Allen, 2008: 165). The deep time of geology historicizes Western civilization as the top layer, the apex of natural history, **and thus stands to justify colonialism and its civilizational projects.** The exploration of cosmological time in the space sciences **extends the colonial project further into the far expanses of the future and the totality of the universe.** In Barad’s deconstructive reading of Enlightenment science, linear time and evacuated space are both the product of active material processes through which a purportedly universal “Man” continually enacts a separation between himself and the universe. It is this supposed separation from the rest of existence that constitutes “Man” as the subject of a **masculinist science** and the remainder of the universe as the object of his will. Practices of scientific observation and colonial occupation work in tandem to re-enact and reinforce this fundamental subject–object relationship. Critical scholars of science have long argued against the purported passivity of observation, from critiques of the Archimedean point (Yaqoob, 2014) to feminist theories of the embodied and situated nature of knowledge production (Haraway, 1988). Yet, beyond simply noting the ontological impossibility of Man’s separation from the universe, Barad theorizes an emergent and contingent form of separability – what she calls agential separability – that is (re)produced through the material practices of apparatuses. Barad explains that “apparatuses enact agential cuts that produce determinate boundaries and properties of entities within phenomena” (2007: 148). Apparatuses determine what comes to matter and how, thus producing differences between Sammler and Lynch 951 subject and object, which are not stable positions but rather enacted and contingent forms of relationality. We employ the apparatus to explore how subject–object relations of Western colonial science are not universal and absolute, but rather enacted through material practices that selectively produce the privileged subject positions on which settler colonialism and space science both depend. Ontologically, apparatuses produce spatial, temporal, and material relations that constitute projects of Western colonial science. This approach helps elaborate arguments like those of Matson and Nunn that “**even the most futuristic space telescopes have embedded within them a lineage of Euro-western cultural supremacy**” (2017: n.p.). This is not to simply claim that telescopes are in some way symbolic of settler colonial relations, but to recognize how **space science apparatuses actively orient relations of observation and materialize settler colonial relations**. Both TMT and HI-SEAS constitute apparatuses **that extend spatially well beyond the infrastructural footprint on these mountains, to the island and surrounding ocean, into the atmosphere, to Moon, Mars, and cosmos**. As part of these apparatuses, mountain environments of Hawaii become both a gateway to the cosmos and simulation of an alien landscape. Temporally, **the apparatus stretches beyond contemporary scientific practices, drawing on longstanding histories of European imperialism, Western law, and settler colonial logics, and projecting these ideologies into offworld futures**. Materially, these projects enroll technological, logistical, and physical systems, including roads, mirrors and lenses, sensors and surveillance devices, electromagnetic waves and domes, the geology of the Hawaiian landscape, and bodies of observer and observed.

**Settler colonialism requires the elimination of indigenous life and land via the occupation of settlers. The appropriation of land turns Natives into ghosts and chattel slaves into excess labor.**

**Tuck and Yang 12**, (Eve Tuck, Unangax, State University of New York at New Paltz K. Wayne Yang University of California, San Diego, Decolonization is not a metaphor, Decolonization: Indigeneity, Education & Society Vol. 1, No. 1, 2012, pp. 1-40, JKS)

Our intention in this descriptive exercise is not be exhaustive, or even inarguable; instead, we wish to emphasize that (a) decolonization will take a different shape in each of these contexts - though they can overlap - and that (b) neither external nor internal colonialism adequately describe the form of colonialism which operates in the United States or other nation-states in which the colonizer comes to stay. Settler colonialism operates through internal/external colonial modes simultaneously because there is no spatial separation between metropole and colony. For example, in the United States, many Indigenous peoples have been forcibly removed from their homelands onto reservations, indentured, and abducted into state custody, signaling the form of colonization as simultaneously internal (via boarding schools and other biopolitical modes of control) and external (via uranium mining on Indigenous land in the US Southwest and oil extraction on Indigenous land in Alaska) with a frontier (the US military still nicknames all enemy territory “Indian Country”). **The horizons of the settler colonial nation-state** are total and **require** a mode of **total appropriation of Indigenous life and land**, rather than the selective expropriation of profit-producing fragments. Settler colonialism is different from other forms of colonialism in that settlers come with the intention of making a new home on the land, a homemaking that insists on settler sovereignty over all things in their new domain. Thus, **relying** solely **on postcolonial literatures or** theories of **coloniality that ignore settler colonialism will not help to envision the shape that decolonization must take in settler colonial contexts**. Within settler colonialism, the most important concern is land/water/air/subterranean earth (land, for shorthand, in this article.) Land is what is most valuable, contested, required. This is both because the settlers make Indigenous land their new home and source of capital, and also because the disruption of Indigenous relationships to land represents a profound **epistemic, ontological, cosmological violence**. This violence is not temporally contained in the arrival of the settler but is reasserted each day of occupation. This is why Patrick Wolfe (1999) emphasizes that **settler colonialism is a structure and not an event**. In the process of settler colonialism, land is remade into property and human relationships to land are restricted to the relationship of the owner to his property. Epistemological, ontological, and cosmological relationships to land are interred, indeed made pre-modern and backward. Made savage. In order for the settlers to make a place their home, they must destroy and disappear the Indigenous peoples that live there. Indigenous peoples are those who have creation stories, not colonization stories, about how we/they came to be in a particular place - indeed how we/they came to be a place. Our/their relationships to land comprise our/their epistemologies, ontologies, and cosmologies. For the settlers, Indigenous peoples are in the way and, in the destruction of Indigenous peoples, Indigenous communities, and over time and through law and policy, Indigenous peoples’ claims to land under settler regimes, land is recast as property and as a resource. **Indigenous peoples must be erased, must be made into ghosts** (Tuck and Ree, forthcoming). At the same time, settler colonialism involves the subjugation and forced labor of chattel slaves, whose bodies and lives become the property, and who are kept landless. Slavery in settler colonial contexts is distinct from other forms of indenture whereby excess labor is extracted from persons. First, chattels are commodities of labor and therefore it is the slave’s person that is the excess. Second, unlike workers who may aspire to own land, the slave’s very presence on the land is already an excess that must be dis-located. Thus, the slave is a desirable commodity but the person underneath is imprisonable, punishable, and murderable. The violence of keeping/killing the chattel slave makes them deathlike monsters in the settler imagination; they are reconfigured/disfigured as the threat, the razor’s edge of safety and terror. The settler, if known by his actions and how he justifies them, sees himself as holding dominion over the earth and its flora and fauna, as the anthropocentric normal, and as more developed, more human, more deserving than other groups or species. The settler is making a new "home" and that home is rooted in a homesteading worldview where the wild land and wild people were made for his benefit. He can only make his identity as a settler by making the land produce, and produce excessively, because "civilization" is defined as production in excess of the "natural" world (i.e. in excess of the sustainable production already present in the Indigenous world). In order for excess production, he needs excess labor, which he cannot provide himself. The chattel slave serves as that excess labor, labor that can never be paid because payment would have to be in the form of property (land). The settler's wealth is land, or a fungible version of it, and so payment for labor is impossible.6 The settler positions himself as both superior and normal; the settler is natural, whereas the Indigenous inhabitant and the chattel slave are unnatural, even supernatural. Settlers are not immigrants. Immigrants are beholden to the Indigenous laws and epistemologies of the lands they migrate to. Settlers become the law, supplanting Indigenous laws and epistemologies. Therefore, settler nations are not immigrant nations (See also A.J. Barker, 2009). Not unique, the United States, as a settler colonial nation-state, also operates as an empire - utilizing external forms and internal forms of colonization simultaneous to the settler colonial project. This means, and this is perplexing to some, that dispossessed people are brought onto seized Indigenous land through other colonial projects. Other colonial projects include enslavement, as discussed, but also military recruitment, low-wage and high-wage labor recruitment (such as agricultural workers and overseas-trained engineers), and displacement/migration (such as the coerced immigration from nations torn by U.S. wars or devastated by U.S. economic policy). In this set of settler colonial relations, colonial subjects who are displaced by external colonialism, as well as racialized and minoritized by internal colonialism, still occupy and settle stolen Indigenous land. Settlers are diverse, not just of white European descent, and include people of color, even from other colonial contexts. This tightly wound set of conditions and racialized, globalized relations exponentially complicates what is meant by decolonization, and by solidarity, against settler colonial forces. Decolonization in exploitative colonial situations could involve the seizing of imperial wealth by the postcolonial subject. In settler colonial situations, seizing imperial wealth is inextricably tied to settlement and re-invasion. Likewise, the promise of integration and civil rights is predicated on securing a share of a settler-appropriated wealth (as well as expropriated ‘third-world’ wealth). Decolonization in a settler context is fraught because empire, settlement, and internal colony have no spatial separation. Each of these features of settler colonialism in the US context - empire, settlement, and internal colony - make it a site of contradictory decolonial desires7.

**Case**

**I affirm the res: the appropriation of outer space by private entities is unjust**

**The rotb is to reject settler colonialism in academia**

**This opens the door for indigenous involvement in outer space**

**Smiles 20,** Deondre Smiles, 10-26-2020, "The Settler Logics of (Outer) Space," Society + Space, <https://www.societyandspace.org/articles/the-settler-logics-of-outer-space> (Dondre Smiles is an Indigenous geographer whose research interests lie at the intersection of several fields, including critical Indigenous geographies, human-environment interactions, political ecology, tribal cultural resource preservation, and science and technology studies. Their current academic position is as an Assistant Professor in the Department of Geography at the University of Victoria, in B.C., Canada.) //tanya

I want to now turn our attention towards the possibilities that exist regarding Indigenous engagement with outer space.  After all, the timing could not be more urgent to do so—we are now at a point where after generations and generations of building the myth that America was built out of nothing, we are now ready to resume the project of extending the reach of American military and economic might in space. To be fair, there are plenty of advances that can be made scientifically with a renewed focus on space exploration. However, history shows us that space exploration has been historically tied to military hegemony, and there is nothing in Mr. Trump’s temperament or attitude towards a re-engagement with space that suggest that his push toward the stars will be anything different. **A sustained conversation needs to be had**—will this exploration be ethical and beneficial to all Americans? **One potential avenue of Indigenous involvement comes through the active involvement of Indigenous peoples and Indigenous perspectives in space exploration, of course. This** involvement **can be possible through viewing outer space through a ‘decolonial’ lens**, for instance. Astronomers such as Prescod-Weinstein and Walkowicz have spoken about the need to avoid replicating colonial frameworks of occupation and use of space when exploring places such as Mars, for example (Mandelbaum, 2018). The rise of logics of resource extraction in outer-space bodies have led to engagements by other academics such as Alice Gorman on the **agency and personhood of the Moon**. **Collaborations between Indigenous people and space agencies** such as NASA help provide the Indigenous perspective inside space exploration and the information that is gleaned from it, with implications both in space and on a Earth that is dealing with climate crisis (Bean, 2018; Bartels, 2019). Another potential avenue of engagement with Indigenous methodologies and epistemologies related to space comes with engaging with Indigenous thinkers who are already deeply immersed into explorations of Indigenous ‘space’ here on Earth—the recent works of Indigenous thinkers such as Waziyatawin (2008) Leanne Betasamosake Simpson (2017), Natchee Blu Barnd (2018) and others provide a unique viewpoint into the ways that Indigenous peoples make and remake space—perhaps this can provide another blueprint for how we might engage with space beyond Earth. And that is just the work that exists within the academic canon. Indigenous people have always been engaged with the worlds beyond the Earth, in ways that often **stood counter to accepted ‘settler’ conventions** of space exploration (Young, 1987). In one example, when asked about the Moon landings, several Inuit said, "We didn't know this was the first time you white people had been to the moon. Our shamans have been going for years. They go all the time...We do go to visit the moon and moon people all the time. The issue is not whether we go to visit our relatives, but how we treat them and their homeland when we go (Young, 1987: 272).” In another example, turning to my own people, the Ojibwe, we have long standing cultural connections to the stars that influence storytelling, governance, and religious tenets (CHIN, 2003). This **engagement continues through to the present day, and points to a promising future**. **A new generation of Indigenous artists, filmmakers, and writers are beginning to create works that place the Indigenous individual themselves into narratives of space travel and futurity, unsettling existing settler notions of what our future in space might look like**. As Leo Cornum (2015) writes, “**Outer space, perhaps because of its appeal to our sense of endless possibility, has become the imaginative site for re-envisioning how black, indigenous and other oppressed people can relate to each other outside of and despite the colonial gaze**.” These previous examples should serve as a reminder that the historical underpinnings of our great national myth are built upon shaky intellectual ground—we need to be honest about this. America did not just spring forth out of nothing; it came from the brutal occupation and control of Native lands. Despite the best efforts of the settler state, Native people are still here, we still exist and make vital contributions to both our tribal communities and science. We cannot expect Donald Trump to turn his back on the national myth of what made the United States the United States—in his mind, this is the glorious history of what made America great in the past. And it should serve as no surprise that Trump and others wish to extend this history into outer space. Even when Trump’s days in the White House are over, the settler colonial logics that underpin our engagement with land on Earth will still loom large over the ways that we may potentially engage with outer space. But for those of us who do work in Indigenous geographies and Indigenous studies, **it becomes even more vital that we heed the calls of Indigenous thinkers inside and outside formal academic structures, validate Indigenous histories, and push to deconstruct the American settler myth and to provide a new way of looking at the stars, especially at a crucial moment where the settler state turns its gaze towards the same.**

**Representations and epistemology perpetuate settler practices – the way we understand and discuss the structures around us overdetermines our praxis**

**Seawright 14** Gardner Seawright is a doctoral candidate in the Education, Culture, and Society department at the University of Utah. “Settler Traditions of Place: Making Explicit the Epistemological Legacy of White Supremacy and Settler Colonialism for Place-Based Education.” EDUCATIONAL STUDIES, 50: 554–572, 2014, American Educational Studies Association. JJN

Situating Settler Traditions Settler traditions of place are an epistemic genealogy—the ethics, logics, and ideologies foundational to a knowledge system that have been passed down across generations, a knowledge framework that establishes what is known (the socially constructed commonsense of a culture), how things come to be known (the process of attaining new knowledge), how the world is to be interpreted according to what is known (the social construction of reality), and how the self is known in relation to perceived reality (the politics of self). Tradition is used as a conceptual tool allowing for domination to be empha- sized as an on-going historical process, while also allowing for epistemology as tradition to simultaneously be evolutionary and a cherished cultural artifact. As a cultural product, settler traditions of place are transmitted across generations through discipline, teaching, modeling and other forms of direct and subtle so- cial communication resulting in normalized habits, beliefs, values, and practices. In speaking about “western cultural traditions,” Val Plumood (2002) argues that there are “epistemic and moral limitations” embedded in these traditions—these normalized habits—that perpetuate hierarchized notions of the world that privi- lege white-hetero-landowning males (99). As Martusewicz et al. (2011) explain, these subtle discourses manifest as taken-for-granted cultural assumptions that are rooted in racism, sexism, classism that intertwine with and reflect the cultivation of violent relationships with the more-than-human world and natural systems that we depend on for life (119). The tradition in question here is the social air that penetrates the Western world, interacting with human beings whether they want it to or not. Using tradition as a metaphor for epistemology allows me to emphasize the way epistemology can im- pact every aspect of life while remaining removed from a deterministic position. Embedded in discourse, tradition appears as ever-present; despite this, individual social actors have the agency to break tradition. Consequently, in the same way that an individual breaks from familial, cultural, or religious tradition and faces the ramifications for transgressing, epistemic transgression can also incur social fallout and cause friction. When an individual epistemically transgresses, they employ an epistemic praxis (the operationalization of an alternative or critical epistemology) that goes against the grain and is counter to the tradition that defines the social environment. For conversations concerning the cultivation of criticality (like the one herein) this break in tradition is absolutely desirable and can inspire what Jose ́ Medina (2013) calls epistemic friction. Epistemic friction is contained in those uncomfortable moments in which our taken-for-granted assumptions about the world begin to crack. These moments can be transformative and cat- alyze critical consciousness to imagine and hopefully actualize an alternative epistemology.