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#### Settler colonialism mobilizes temporality itself in service of the consummation of white settler sovereignty – this operates through liberal narratives of progressivism that rely upon a vanishing endpoint of a “better world” achieved through the completion of the project of settler modernity. Normative debate is structured by the imperative of forward motion that locates the plan as a transformative break with colonial society that relegates the backwardness of indigeneity to the past and envisions a settler utopia in its place.

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Time, decolonization and colonial completion Critical geographers use Foucault’s insights to unsettle modern understandings of space as a fixed environment in which politics takes place. Instead, they show that political projects construct, naturalize and respond to particular spatial understandings.30 In relation to Indigenous policy, critical analysts are quick to identify these political deployments of space. SuvendriniPerera, for example, shows that policy-makers represent remote Indigenous communities as ‘set apart from the body of the nation, and as the locus of unspeakable violence and abjection’.31 As part of the discourse of the Northern Territory Intervention, the metaphor of the distant frontier — or vulnerable centre — is pervasive. Remote Aboriginal communities prescribed for Intervention are para - digmatically referred to in media reports as ‘remote Aboriginal societies’, ‘this other Australia’, ‘the remote world’ and as ‘a distinct domain’.32 Unsettling dominant understandings of time is equally important. In his work ‘The End of the Passing Past’, Walters aims to ‘think about change in ways that refuse the obligation to side with or against continuity… and resist the temptations of progressivism and reductionism’.33 He draws on Bruno Latour’s examination of the modern temporal imaginary, and his denat - uralizing of modern political timelines: We have never moved either forward or backward. We have always actively sorted out elements belonging to different times. We can still sort. It is the sorting that makes the times, not the times that make the sorting.34 This interrogation is especially useful in relation to understanding settler colonialism and Indigenous policy-making. Barry Hindess, Elizabeth Povinelli and N. Sheehan, for example, reflect on Western temporal constructions of Aboriginality and indicate how these relate to liberal political agendas. Barry Hindess argues that liberalism tends to locate different cultures in its own past, even when they coexist with liberal societies in the present.35 Indigenous groups, in particular, are located prior to the transformative moment of sovereign agreement, which in turn is read as an indication of their incapacity to enter into this superior, rational political future. Norm Sheehan maintains that settler colonialism in Australia is deeply invested in these kinds of temporal logics: In contrast to previous colonial contexts which tended to focus on constructing difference based on inherent racial traits the antipodean designation as primitive defines this specific other as non-other. The antipodean aborigine is by definition from the origin of (all) mankind which positions this primitive as an earlier and therefore lesser version of European self.36 Elizabeth Povinelli briefly makes a similar point in her analysis of recent Australian Indigenous policy: [E]ven as liberalism came to accept its fate as a culture among other cultures it differentiated the tense and orientation of its cultural difference from other cultures. The West as a general idea would claim the future and claim the potentiality of individuals and assign the past and the constraint of individuals to others — or, it would recognize that these were the values of non-liberal cultures.37 She refers to these patterns of political temporal positioning as ‘technologies of temporality’. Drawing together the work of Walters, Hindess, Sheehan and Povinelli, it becomes apparent that colonialism does not just take place in time. It constructs narratives of time, in ways that create particular political relationships in the present, and attempts to move itself through time to a certain political future. In the remainder of this section, we compare the temporalities of post-colonial and settler-colonial political formations, and argue that both anchor themselves to some sort of transformative ‘endpoint’. This radical political break separates a problematic past from a completed future and, in settler-colonial societies, involves a strange assemblage of ideas about decolonization, revolution, full colonization and sovereign exchange. The term post-colonial implies ‘the notion of a movement be - yond’;38 ‘the “post” in “post-colonial” suggests “after” the demise of colonialism, it is imbued, quite apart from its user’s intentions, with an ambiguous spatio-temporality’.39 In a number of former colonies (both extractive, such as India, and settler, such as Algeria), the formal colonial project has indeed ended. The term postcolonial captures something about the complex political realities of these nation-states today. A dramatic, and often violent, moment of structural decolonization separates these state’s colonial pasts from their post-colonial presents. However, even in relation to those nations which have undergone such institutional transformations, scholars contest the use of the term. Ella Shohat suggests that it erases the ongoing structural imperialisms that persist: ‘How then does one negotiate sameness and difference within the framework of a “post-colonial” whose “post” emphasizes rupture and deemphasizes sameness?’40 Some scholars use the term neocolonialism to indicate political continuity, and to contest the understanding that critical post-colonial work seeks to put out minor spot-fires of inequality left by ‘real’ colonialism.41 If the temporal narrative of post-colonialism is problematic in relation to former extractive colonies, it is altogether inaccurate when applied to ongoing settler colonies such as Australia. Yet post-colonial scholarship has dominated international academic [T]he lack of historical specificity in the ‘post’ leads to a collaps - ing of diverse chronologies … It equates early independence won by settler colonial states, in which Europeans formed their new nation-states in non-European territories at the expense of Indigenous populations, with that of nationstates whose indigenous populations struggled for inde - pendence against Europe.42 Australia has not, and most probably will not, undergo the kind of institutional transfer of control to the Indigenous population that could justify the application of the term post-colonial. And yet it is quite common to see Australia identified as a post-colonial or decolo nizing nation in cultural studies, literary theory and policy analysis.43 One of the greatest contributions of the emerging field of settler-colonial studies is the fact that it provides clear conceptual tools to articulate exactly why it is that nations like Australia and Canada should be understood differently. However, it is important not to overstate the uniqueness of settlercolonial studies in Australian scholarship. Critical Indigenous the - orists are carrying on their own conversation regarding Australian colonial conditions, and have long contested the relevance of the term post-colonial. Irene Watson, for example, argues: I understand the contemporary colonial project as one that has continued unabated from the time of the landing and invasion by the British in 1788 … the Australian state retains a vested interest in keeping the violence going, and the inequalities and iniquities that are maintained against Aboriginal peoples for the purpose of maintaining the life and continuity of the state. A question the Australian state is yet to resolve is its own illegitimate foundation and transformation into an edifice deemed lawful. Within this unanswered questionable structure the Australian state parades as one which has obliterated the ‘founding violence’ of its ‘illegitimate origins’ and ‘repressed them into a timeless past’.44 Aileen Moreton-Robinson instead uses the term post-colonizing, capturing the ambiguous and shifting temporal technologies deployed in settler-colonial Australia. These new conceptual models have grown productively out of the object of our study: the postcolonizing world we inhabit. Our respective geographical locations are framed by nation states such as the USA, Canada, Australia and New Zealand where colonization has not ceased to exist; it has only changed in form from that which our ancestors encountered.45 While settler-colonial studies proceeds from a conceptual distinction between extractive and settler colonialism, Indigenous scholarship is based in the lived experiences of ongoing colonization.46 Settlercolonial studies would benefit from connecting to this existing academic conversation that runs parallel to and intersects with its own ideas in important ways. In particular, it draws attention to ongoing Indigenous contestation of colonial projects, and counters the tendency towards totalizing, structural accounts of settler colonialism. As Watson observes: Today our voices are still talking while the colonial project remains entrenched and questions concerning identity politics, and the ‘authentic native’ are constructed and answered by those who have power.47 Up to this point, we have been drawing together points made by other scholars. Settler colonialism has an ongoing, structural temporality, which is generally unacknowledged and contrasts with the linear colonialism–decolonization–post-colonialism narrative. However, we suggest that the application of a unidirectional, progressive temporality to the settler-colonial context is not just an analytical mistake, but a ‘technology of temporality’. This conception is taken up within the settler-colonial project in ways that work towards the consummation of settler sovereignty. The borrowed notion of a ‘radical break’ is variously located in settler colonialism’s past, present or future. By harnessing the decolonizing resonances of this concept of colonial transforma - tion, the settler-colonial project obscures the very different political effects of its own ‘vanishing endpoint’.48 What is this vanishing endpoint, which seems to lurk in all of our imaginations, our policy projects and our political debates? Instead of the moment of decolonization, it is the moment of full colonization — or rather, it is both, because in this imagined moment colonial relationships will dissolve themselves and settler authority will be naturalized. This transformative event is both an impossible colonial dream, premised on the disappearance of Indigenous political difference, and a concrete political project that justifies all manner of tactics in the present. But what are the political con - sequences of such a preoccupation? And do Indigenous participants in the colonial relationship seek the same kind of resolution and dissolution? Significantly, the Western colonial narrative of transformational change maps onto another Western imaginary — the moment of sovereign transformation encapsulated in the social contract. This is the moment that a group of people transition from collective social ‘status’ into individualized freedom and contractual person - hood.49 It is also the movement out of a constraining ‘history’ into an atemporal, rational present. As Hindess argues, liberalism con - signs its Indigenous contemporaries to its own past, and imagines this location in the past to be ‘a kind of moral and intellectual failure’, revealing the incapacity and disinclination to enter into a social contract and join the present.50 Therefore, the movement through time, via a radical transformative moment, is also the developmental movement from incapacity to capacity. An unstable but productive dichotomy emerges between, on the one hand, Indigenous political difference-incapacity-status-injustice-lack of sovereignty, and on the other, colonial completion-capacitycontract-freedom-sovereign inclusion. These oppositions are separated by an image of a single, interchangeable and undefined threshold — the transformative event. This temporal narrative belongs to both progressive and conservative articulations of the settler-colonial future; the settler colonial endpoint is variously positioned as an inevitable global trend,51 a past achievement yet to be fully recognized,52 and a future goal for which Aboriginal people must prepare.53 As Povinelli notes, these conceptions are not only temporal, but also teleological: [T]hese tenses are in turn articulated to other discourses of time and event such as teleological discourses that apprehend events ‘as the realization of an already given end or telos and eschatological discourses that wait for ‘extreme’ or ‘ultimate’ moments and events which immediately precede or accompany ‘the end of history’ and ‘its reversal into eternity’.54 The transformative event is positioned as part of an inevitable and inescapable trajectory (although it may be consistently deferred or delayed). In this way, the eventual legitimacy and stability of the settler-colonial project is always-already assumed. Through this a priori assumption, settler colonialism is able to entrench and sustain itself on the basis of its eventual demise. The following section traces the appearance and temporal location of this settler-colonial end - point in recent Australian Indigenous policy phases.

#### Space science is structured by the imperative of progress that demands the universal imposition of linear time and the reproduction of evacuated space – indigenous continuities of space and time are located simultaneously as the “blank slate” upon which the “perfect laboratory” can be constructed and the antagonistic pre-modern savage obstructing the emergence of settler modernity.

Sammler and Lynch ’21 -- (Katherine G Sammler, Casey R Lynch, 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, accessed 1-12-2022)//nikki

Settler colonial space-times [T]he idea of a closed system [is] a concept that was constituted by the island laboratory and the irradiated atoll and perpetuated by the aerial view. (DeLoughrey, 2012: 168) The links between space science, Western imperialism, and settler colonialism are not confined to the history of Cook’s voyages or the settler colonial conditions of contemporary Hawai'i. Rather, they are entangled in ongoing histories of the Enlightenment in which ideologies of European superiority – used to justify violent conquest and pillaging of Indigenous lands – rely upon claims of scientific objectivity, modernity, universality, and futurity (Byrd, 2011). In this section, we situate TMT and HI-SEAS in the history of colonial imaginaries of islands as abstract laboratories for scientific experimentation. We then consider how this erasure of space is entangled with Western conceptions of time that relegate Indigeneity to the past while producing linear, progressive futures (Goodyear-Ka‘ōpua, 2017). We bring these reflections together through Barad’s notion of the apparatus, which we employ to critically examine TMT and HI-SEAS. Island laboratories 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.” There is a long history of the liveliness of islands being abstracted by colonial powers and scientists alike, from seemingly innocuous use of the Galápagos 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. Settling time As an empire of time rather than space … many significant American national theorists sought to escape the political paradoxes of space by conquering time. (Allen, 2008: 13) Allen examines how U.S. empire depends upon three notions of time: a romanticized historical time recounting myths 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. The projection of settler futures depends on the ordering of time, constituted by ideologies of progress, of a mythologized past and present oriented toward the future. Scientific “progress” is positioned as a universal value key to constructing the future, while questioning the actions of Western science is positioned as irrational or reactionary. Concerning the TMT controversy, Casumbal-Salazar writes: Relegated to the ‘dark ages’ of tradition, Native peoples appear as the agonistic menace of the modern scientific state. Delegitimized as irrational within the gendered hierarchies of Western science and philosophy … Hawaiians become suspect and subject to institutional anti-Native racism yet fetishized as an archeological remnant within multicultural society. (2017: 2) 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‘ōpua explains how “settler state officials cast the kiaʻi [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. Linear conceptions of time are necessarily produced out of complex practices that organize and control relative and variable spatio-temporal formations. Rifkin posits a multiplicity of temporalities, writing: temporalities need to be understood as having material existence and efficacy in ways that are not reducible to a single, ostensibly neutral vision of time as universal succession. The concept of frames of reference provides a way of breaking up this presumed timeline by challenging the possibility of definitively determining simultaneity … Within Einsteinian relativity, simultaneity depends on one’s perspective based on one’s frame of reference. (2017: 20) Einstein’s theory of relativity demonstrates how time is relative, variable, and dependent on acceleration, which is a function of location within a gravitational field. It is a relationship between space, masses, and matter. As Valentine explains: gravity is a consequence of the relational warping of spacetime by matter … That is, gravitational effects are literally universal but emerge locally through relativistic and constantly shifting specific relations among the mass of cosmic bodies and spacetime, producing variable observations from differently situated observers of one another (2017: 189–190). The practices of Western astronomy are dependent on variable and relative relations among space and time. Whether it is earth-bound astronomers punching the clock on Martian time (Mirmalek, 2020) or the stretching of temporal experience in a gravity well, the location of bodies matters as it produces ‘differently situated observers,’ who experience time differently based on their frames of reference. Yet, time is held as a stable frame of reference from which the colonial scientist constitutes the metric for a purportedly universal observer situated in a neutral position of observation. Even Western science’s own understanding of time refuses to conform to Enlightenment notions of universality, demonstrating a contradiction between this ontology and the broader political and social ideologies with which it is entangled. 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. The apparatus Gazing out into the night sky or deep down into the structure of matter, with telescope or microscope in hand, Man [sic] reconfirms his ability to negotiate immense differences in scale in the blink of an eye. Designed specifically for our visual apparatus, telescopes and microscopes are the stuff of mirrors, reflecting what is out there … Man is an individual apart from all the rest. And it is this very distinction that bestows on him the inheritance of distance, a place from which to reflect-on the world, his fellow man, and himself. A distinct individual, the unit of all measure, finitude made flesh, his separateness is the key. (Barad, 2007: 134, emphasis added) 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 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. Barad’s theory of spacetimemattering highlights the mutual constitution of space and time through the ongoing material re-configuring of the world. Apparatuses are neither neutral probes of the natural world nor social structures that deterministically impose some particular outcome …  the notion of an apparatus is not premised on inherent divisions between the social and the scientific …  [they] are the practices through which these divisions are constituted. (Barad, 2007: 169) Reconceiving subjectivity, objectivity, space, time, and matter in this way implies that questions of ethics are inseparable from apparatuses as practices that produce differences and iteratively construct the world. Apparatuses enact material changes through which some possibilities are realized while others are foreclosed. 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.

#### Under a regime of nationalization outer space is a perpetual site of conquest and colonization – the latest iteration of the genocidal project of terra nullius aimed at the naturalization of settler sovereignty over the “untamed” and “unknown” geographies of space. The project of extraterrestrial appropriation is rooted in the eliminatory logics of settler colonialism that seek to reinstitute the dispossession of Manifest Destiny in the present at the expense of indigeneity.

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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 and ‘Space’ 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: One scientist told me that astronomy is 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?

#### Space management cannot be understood outside of settler colonialism. The infrastructure, institutions, and Eurocentric values of space policy are considered the hallmarks of science and progress, which become weaponized against Indigenous resistance.

Matson and Nunn 17

(Zannah Mae Matson is a PhD student in Human Geography at the University of Toronto, Neil Nunn is a PhD candidate in the Department of Geography and Planning at the University of Toronto, 10-3-17, SPACE INFRASTRUCTURE, EMPIRE, AND THE FINAL FRONTIER: WHAT THE MAUNA KEA LAND DEFENDERS TEACH US ABOUT COLONIAL TOTALITY, Society and Space, <https://societyandspace.org/2017/10/03/space-infrastructure-empire-and-the-final-frontier-what-the-mauna-kea-land-defenders-teach-us-about-colonial-totality/>, JKS)

Mauna Kea is a dormant volcano and the highest point on the archipelago of Hawai’i. When measured from its base at seafloor, it is the tallest mountain on earth. These towering heights, in a region of the world with minimal light pollution has also earned Mauna Kea recognition of being one of the best spots on the planet for examining the cosmos. Long before the development of modern space infrastructure, however, the peak of Mauna Kea was regarded by native Hawaiians as among the most sacred places on the archipelago of Hawai’i. The place where earth meets the heavens. These divergent perspectives are embedded within a larger relationship of imperial domination that has seeded a century of unrest. While the primary focus of the protest was to challenge a half-century disregard for this sacred site by numerous entities and interests, the Battle for Mauna Kea cannot be understood outside Hawaii’s 125 year-long history of colonial occupation. In 1893, the Hawaiian Kingdom and its Queen, Lydia Kamaka’eha Lili’uokalani, were overthrown by a US led military coup (Long, 2017). Speaking to a spirit of resistance that has existed on the islands since the coup, scholar-activist K. Kamakaoka’ilima Long (2017: 15) states: “four decades of land struggles and cultural historical recovery… have grown a Hawaiian sovereignty movement… playing out in both land defense and as a movement to re-realize Hawaiian political independence as a sovereign state.” This recent assertion of self-determination, now known as the battle for Mauna Kea, has grown to become a global movement with broad support from high-profile figures and the hashtags #Wearemaunakea, #ProtectMaunaKea, and #TMTshutdown trending widely on social media. More than just a source of inspiration for the groundswell anti-colonial movements around the world, this story provides a context to better understand ongoing colonial occupation that is reinforced through the constitutive power of space infrastructure. Working from decades of resistance that culminated in the “battle for Mauna Kea,” we engage the notion of colonial totality to conceptualize the resistance to space infrastructure and the ongoing US occupation of Hawaii, reflecting on what this movement provides for better understanding totality and the relationship between space infrastructure and the shifting nature of colonial occupation more broadly. The notion of totality describes the process by which occupied spaces are coded with Western values in the form of normalized cultures, epistemologies, and institutions that produces an “atomistic image of social existence” (Quijano, 2007: 174). The institutions, ideologies and systems that advocate for the construction of space infrastructure exemplify this process. Astronomers frame the building of the observatory infrastructure as an essential piece in advancing our knowledge of outer space and ultimately achieving ‘universal’ progress. The resistance to development of these infrastructural systems is an invitation to consider the relationship between space as a frontier of discovery and ongoing questions of settler colonialism; the blockade has made visible the inherent relationship between the infrastructure of scientific exploration and the logic of totalizing colonial rationality that enables the development of massive telescopes on occupied land. While these perspectives of colonial totality provide a useful understanding of power and institutions that shape this conflict, we suggest that the Hawaiian land defenders’ refusal of the normalizing force of space infrastructure demonstrates the complexities and conditions relating to the notion of totality and ultimately the inadequacies of the concept. During a public comment period at 2015 University of Hawai‘i Board of Regents meeting, Dr. Pualani Kanaka’ole Kanahele gestures to both the totalizing colonial discourse that suppresses her cultural beliefs and the importance of fighting back against these systems: … we believe in the word of our ancestors…they say we are the products of this land and that is our truth…and that is what we are fighting for. This is our way of life. This is not our job. We don’t earn money from doing this. But for generations after generations, we will continue to be doing what we are doing today. What Dr. Kanahele speaks of goes beyond the physical destruction of the sacred ancestral site, to describe a hegemonic normalization and occupation that actively effaces traditional Hawaiian ways of being in the world. The words and actions of the land defenders challenge totalizing structures that classify space according to a narrow set of beliefs about the world. Working from these acts of resistance, we want to suggest that the Hawaiian sovereignty movement illuminates how systems of scientific thought and the project of space exploration rely on Euro-western values being the standard by which all other values are measured. It is this wide acceptance of these structures and principles of reasoning that serve to justify the construction of infrastructure that at once reproduces and fortifies these myths. This self-reinforcing relationship between the production of space infrastructure and the logics that justify it speaks to a powerful aspects of colonial totality: the way it gains power by rendering illegible the very elements relied upon to actively produce the other. The generally unquestioned salience of space infrastructure is a powerful example of this. As Quijano (2007: 174) describes, the relationship between colonialism and scientific discourse is a mutually reinforcing and “part of, a power structure that involved the European colonial domination over the rest of the world.” In Hawai’i, we see the settler colonial process of cultural attrition operating through a totalizing force of colonial knowledge systems that extend beyond physical occupation of land to include an erasure of Indigenous Hawaiian ways of knowing. Although the spatialities and technologies associated with this form of stellar navigation are radically dissimilar, we suggest that on a basic level, this form of space exploration is continuous with a lineage of Euro-western projects of discovery. In short, space as the ‘final frontier’ is not simply a metaphor but speaks to the role of astronomy in upholding the ongoing projection of values onto new territories and extending power and acquisition of territory to those complicit in colonial processes. This extends both to the world’s highest peaks and into the heavens. Space infrastructure is central to this ongoing frontier process that seeks to code ‘new’ territories as knowable according to certain values and, as a result, casts inhabitants who fall outside this paradigm as irrational, less-than-human, and exploitable. However, as Lowe (2015: 2) warns, these abstract promises of human freedoms and rational progress are necessarily discordant with the “global conditions on which they depend.” Which is to say that these atomistic systems dispose of the very relationships and elements of life that make them possible. A belief in respecting the sacredness of the world is just one example of this. It is also essential to recognize the process of establishing colonial totality is one that imperial forces have worked tirelessly to instill. Recognizing this helps to disrupt an appearance of givenness that colonial occupation relies upon. The land defenders have been vocal about this, reminding of us of the fact that since the arrival of James Cook to the Hawaiian Islands in 1778, settler colonial campaigns have been advancing longstanding patterns of cultural removal, fueled by beliefs in colonial supremacy. Following the coup and overthrow of the Hawaiian monarchy by US-led forces, a colonial oligarchy banned Hawaiian languages from schools and formalized English as the official language for business and government relations (Silva, 2004: 2-3). This legislation eroded language, culture, and sacred practice; and is an example of what Ngũgĩ wa Thiong’o (cited in Silva, 2004: 3) describes as a “cultural bomb” of settler colonialism that serves to “annihilate a people’s belief in their names, in their languages, in their environment, in their heritage of struggle, in their unity, in their capacities and ultimately in themselves.” According to Chickasaw theorist Jodi Byrd, continually reflecting on the historical and ongoing work that maintains the conditions of settler colonialism is essential to resisting the tendency for colonial constraint to appear inevitable, unresolvable, and complete (Byrd, 2011; see also Simpson, 2014). There was nothing, easy, given, or natural about processes of colonial occupation. While we acknowledge the usefulness of totality for thinking about colonial supremacy, we have concerns about its tendency to inscribe an inaccurate depiction of Euro-western superpower with total ideological control over subjugated Indigenous population. Put differently, we are cautious of the work that the notion of totality does to reinforce a too widely accepted view of Indigenous populations as helplessly dominated, or even anachronistic. The Hawaiian sovereignty movement demonstrates that this is not the case. What the battle at Mauna Kea has shown—akin to other efforts of refusal, such as those at Standing Rock—is that the war against colonialism is ongoing. At present, it appears the land protectors have been successful in their goals of halting construction, as the development team behind the project has begun considering secondary sites for the telescope. The resistance at Mauna Kea, then, is a powerful symbol of the possibility of rupturing the normative totality of Modernist scientific rationality, but it also underscores the recalcitrance of the structures of control and the challenges of pushing back against colonial occupation. However, despite this rupturing of hegemonic ideas of science and progress through the resistance movement, the dominant response from the scientific community has been largely one of confusion and perplexity. This reaction to the uprising speaks to the power of the narratives that cement the Western framework as ‘truth,’ ‘natural,’ and ‘given.’ For these representatives of state and international institutions, violent control is re-framed as co-existence to achieve Modernist notions of progress, while the claims of Indigenous people are reduced to frivolous demands with primitive and irrational connections to the past. This, of course, exists with little consideration of the irony of how this frenzy to build infrastructure that works to “know” the cosmos may be read as equally irrational. This essay has sought to consider the relationship between infrastructure and colonialism, emphasizing that even the most futuristic space telescopes have embedded within them a lineage of Euro-western cultural supremacy. It is important to recognize the extant materiality of these infrastructures as a manifestation of hegemonic systems that perpetuate myths of rationality and Euro-western cultural supremacy. The battle for Mauna Kea movement highlights the importance of remembering the long historical processes and extensive exertion of colonial constraint and cultural removal that has been necessary to maintain control of the land. Despite the social processes that naturalize colonial infrastructure, there is nothing essential, necessary, or pre-ordained about enormous telescopes. The success of the land defenders at Mauna Kea, and the support the movement gained around the world, shows us that Euro-western forces and the infrastructure that is central to maintaining their normative influence, are replete with fissures and contradictions worth pushing against. In spite of the hegemonic forces of modernity and rationality behind the construction of the TMT and a continued attempt to assert colonial totality, the battle at Mauna Kea indicates these hegemonic forces have been far from totalizing. The colonial powers do not have the final word. The land defenders at Mauna Kea have demonstrated a powerful vision for disrupting normative ways of occupying land and knowing the cosmos inspiring us to think further on the complexities of mobilizing infrastructure to resist colonialism. It is within these ruptures that we see a potential for a continued learning from the stars and our social existence.

#### Extraterrestrial colonialism is naturalized through the discourse of public ownership – the resolution’s call to condemn the doctrine of private appropriation and replace it with nationalization is a call to recenter the settler public as the legitimate and rightful owners of space and place.

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By Force of Expectation: Colonization, Public Lands, and the Property Relation

Over the course of the long nineteenth century, land policy was increasingly deployed as a means of encouraging western settlement, while also being symptomatic of the tensions among federal administration, private speculators, and extra-legal settler encroachment.13 As is often noted in scholarship on the public domain—but infrequently emphasized in discussions of the United States more generally—almost one-third of all land in the United States is administered by the federal government. This land is disproportionately concentrated in the western states, with federal acreage totaling nearly 80 percent of Nevada, 63 percent of Utah, and 53 percent of Oregon.14 Considered a revenue source for federal war debt during the early national era, public land policy operated initially to survey, secure, and dispose collateral in the service of national solvency in accordance with the Land Ordinance of 1785.15 Enormous giveaways and preferential lease arrangements for railroad corporations and extractive industries accompanied the aftermath of the Civil War. The Taylor Grazing Act of 1934 inaugurated a new era in federal management of public lands by instituting grazing fees for use of the public domain and effectively ending homesteading.16 In 1976, the Federal Land Policy and Management Act mandated multiple-use standards—including environmental protections aligned with the 1969 National Environmental Policy Act—that continue to govern Bureau of Land Management oversight.17 It was in the context of increased federal management and conservationist legislation that ranchers such as the Bundys increasingly cast themselves as victims of government overreach, as the true embodiment of the American people oppressed by governmental tyranny. Moreover, as has been the case in other settler uprisings in the west, the Bundys displayed no interest whatsoever in the actual and still-present Native peoples whose land they occupied as anything other than a historical metaphor for contemporary white injury. As Ryan Bundy remarked during the 2016 occupation of the Malheur National Wildlife Refuge in Oregon, the militia “recognize that the Native Americans had the claim to the land . . . but they lost that claim. . . . There are things to learn from cultures of the past, but the current culture is the most important.”18 In fact, a variety of claims to land are made in the name of “the public” and “the people” as a collective interest in opposition to the federal government, the extractive industries, or the supposedly special interests of Native American tribes.19 Here, generalized claims to representing “the public” and “the people” obscure the particular and often antagonistic positions that galvanize such claims, as well as casting tribes as a single interest group that fraudulently make claims in the name of sovereignty and treaty rights. The spectrum of debate on public lands today tends to naturalize the white nationalism espoused by the Bundys—even when ostensibly criticizing the occupations as extremist or without merit—by recourse to conceptions of the national public and natural resources as national commons.20 The notion of the commons itself is a logic of apparent universal access and public good that is used to justify indigenous dispossession, depicting the particular and historical belonging of Native peoples as an overly self-interested obstacle to the greater good of the commons. At the same time, recourse to an exceptionalist discourse that casts public lands as “the common birthright of all Americans” has become a frequent rejoinder to either plans for the large-scale transfer of federal lands to states and private industry. For instance, Utah Congressman Jason Chaffetz’s proposed Disposal of Excess Federal Lands Act in January 2017 was abruptly withdrawn after criticism from groups such as Backcountry Hunters and Anglers proclaimed: “It seems the politicians on Capitol Hill have forgotten to whom the land actually belongs. You, me and every other citizen of this country.”21 The substance of the bill echoed both Utah’s 2012 Transfer of Public Lands Act (which demanded that the U.S. Congress convey federal public lands to the state) and the 2016 Republican Party campaign platform (which likewise called for the devolution of public lands to states), even as it remained out of step with public statements by Donald Trump and Montana representative Ryan Zinke, then Trump’s likely nominee on his way to becoming the Secretary of the Interior, who sought to maintain federal control while increasing deregulation to allow for expanded access for private industry.22 Yet both proponents of the populist “to whom the land actually belongs” and legislators espouse a defensive nationalism and incontrovertible possession contingent upon the presumed comprehensive dispossession of indigenous peoples.

#### The alternative is an incommensurable project of decolonization that necessitates the repatriation of indigenous lands, the abolition of slavery and property, and the dismantling of the global imperial metropole – this is a complete disavowal of settler futurity that refuses to be punctuated by narratives of reconciliation.

Tuck & Yang 12 [Eve Tuck is Associate Professor of Critical Race and Indigenous Studies at the Ontario Institute for Studies in Education (OISE), University of Toronto. She is Canada Research Chair of Indigenous Methodologies with Youth and Communities. K. Wayne Yang writes about decolonization and everyday epic organizing, particularly from underneath ghetto colonialism, often with his frequent collaborator, Eve Tuck. Currently, they are convening The Land Relationships Super Collective, editing the book series, Indigenous and Decolonizing Studies in Education, and editing the journal, Critical Ethnic Studies. He is interested in the complex role of cities in global affairs: cities as sites of settler colonialism, as stages for empire, as places of resettlement and gentrification, and as always-already on Indigenous lands. \*Sometimes he writes as la paperson, an avatar that irregularly calls.“Decolonization is not a metaphor,” *Decolonization: Indigeneity, Education & Society* Vol 1 No 1 (2012) //tjb]

**Having elaborated on settler moves to innocence, we give a synopsis of the imbrication of settler colonialism with transnationalist, abolitionist, and critical pedagogy movements - efforts that are often thought of as exempt from Indigenous decolonizing analyses - as a synthesis of how decolonization as material, not metaphor, unsettles the innocence of these movements.** **These are interruptions which destabilize, un-balance, and repatriate the very terms and assumptions of some of the most radical efforts to reimagine human power relations. We argue that the opportunities for solidarity lie in what is incommensurable rather than what is common across these efforts.** **We offer these perspectives on unsettling innocence because they are examples of what we might call an ethic of incommensurability, which recognizes what is distinct, what is sovereign for project(s) of decolonization in relation to human and civil rights based social justice projects.** There are portions of these projects that simply cannot speak to one another, cannot be aligned or allied. **We make these notations to highlight opportunities for what can only ever be strategic and contingent collaborations, and to indicate the reasons that lasting solidarities may be elusive, even undesirable.** Below we point to unsettling themes that challenge the coalescence of social justice endeavors broadly assembled into three areas: Transnational or Third World decolonizations, Abolition, and Critical Space-Place Pedagogies. For each of these areas, we offer entry points into the literature - beginning a sort of bibliography of incommensurability. Third world decolonizations **The anti-colonial turn towards the transnational can sometimes involve ignoring the settler colonial context where one resides and how that inhabitation is implicated in settler colonialism, in order to establish “global” solidarities that presumably suffer fewer complicities and complications.** This deliberate not-seeing is morally convenient but avoids an important feature of the aforementioned selective collapsibility of settler colonial-nations states. Expressions such as “the Global South within the Global North” and “the Third World in the First World” neglect the Four Directions via a Flat Earth perspective and ambiguate First Nations with Third World migrants. **For people writing on Third World decolonizations, but who do so upon Native land, we invite you to consider the permanent settler war as the theater for all imperial wars**: ● the Orientalism of Indigenous Americans (Berger, 2004; Marez, 2007) ● discovery, invasion, occupation, and Commons as the claims of settler sovereignty (Ford, 2010) ● heteropatriarchy as the imposition of settler sexuality (Morgensen, 2011) ● citizenship as coercive and forced assimilation into the white settler normative (Bruyneel, 2004; Somerville, 2010) ● religion as covenant for settler nation-state (A.J. Barker, 2009; Maldonado-Torres, 2008) ● the frontier as the first and always the site of invasion and war (Byrd, 2011), ● U.S. imperialism as the expansion of settler colonialism (ibid) ● Asian settler colonialism (Fujikane, 2012; Fujikane, & Okamura, 2008, Saranillio, 2010a, 2010b) ● the frontier as the language of ‘progress’ and discovery (Maldonado-Torres, 2008) ● rape as settler colonial structure (Deer, 2009; 2010) ● the discourse of terrorism as the terror of Native retribution (Tuck & Ree, forthcoming) ● Native Feminisms as incommensurable with other feminisms (Arvin, Tuck, Morrill, forthcoming; Goeman & Denetdale, 2009). Abolition **The abolition of slavery often presumes the expansion of settlers who own Native land and life via inclusion of emancipated slaves and prisoners into the settler nation-state.** As we have noted, it is no accident that the U.S. government promised 40 acres of Indian land as reparations for plantation slavery. Likewise, indentured European laborers were often awarded tracts of ‘unsettled’ Indigenous land as payment at the end of their service (McCoy, forthcoming). **Communal ownership of land has figured centrally in various movements for autonomous, self-determined communities. “The land belongs to those who work it,” disturbingly parrots Lockean justifications for seizing Native land as property, ‘earned’ through one’s labor in clearing and cultivating ‘virgin’ land.** For writers on the prison industrial complex, il/legality, and other forms of slavery, we urge you to consider how enslavement is a twofold procedure: removal from land and the creation of property (land and bodies). **Thus, abolition is likewise twofold, requiring the repatriation of land and the abolition of property (land and bodies).** Abolition means self-possession but not object-possession, repatriation but not reparation: ● “The animals of the world exist for their own reasons. They were not made for humans any more than black people were made for white, or women created for men” (Alice Walker, describing the work of Marjorie Spiegel, in the in the preface to Spigel’s 1988 book, The Dreaded Comparison). ● Enslavement/removal of Native Americans (Gallay, 2009) ● Slaves who become slave-owners, savagery as enslavability, chattel slavery as a sign of civilization (Gallay, 2009) ● Black fugitivity, undercommons, and radical dispossession (Moten, 2008; Moten & Harney, 2004; Moten & Harney, 2010) ● Incarceration as a settler colonialism strategy of land dispossession (Ross, 1998; Watson, 2007) ● Native land and Native people as co-constituitive (Meyer, 2008; Kawagley, 2010) Critical pedagogies The many critical pedagogies that engage emancipatory education, place based education, environmental education, critical multiculturalism, and urban education often position land as public Commons or seek commonalities between struggles. Although we believe that “we must be fluent” in each other’s stories and struggles (paraphrasing Alexander, 2002, p.91), we detect precisely this lack of fluency in land and Indigenous sovereignty. Yupiaq scholar, Oscar Kawagley’s assertion, “We know that Mother Nature has a culture, and it is a Native culture” (2010, p. xiii), directs us to think through land as “more than a site upon which humans make history or as a location that accumulates history” (Goeman, 2008, p.24). The forthcoming special issue in Environmental Education Research, “Land Education: Indigenous, postcolonial, and decolonizing perspectives on place and environmental education research” might be a good starting point to consider the incommensurability of place-based, environmentalist, urban pedagogies with land education. ● The urban as Indigenous (Bang, 2009; Belin, 1999; Friedel, 2011; Goeman, 2008; Intertribal Friendship House & Lobo, 2002) ● Indigenous storied land as disrupting settler maps (Goeman, 2008) ● Novels, poetry, and essays by Greg Sarris, Craig Womack, Joy Harjo, Gerald Vizenor ● To Remain an Indian (Lomawaima & McCarty, 2006) ● Shadow Curriculum (Richardson, 2011) ● Red Pedagogy (Grande, 2004) ● Land Education (McCoy, Tuck, McKenzie, forthcoming) More on incommensurability Incommensurability is an acknowledgement that decolonization will require a change in the order of the world (Fanon, 1963). This is not to say that Indigenous peoples or Black and brown peoples take positions of dominance over white settlers; the goal is not for everyone to merely swap spots on the settler-colonial triad, to take another turn on the merry-go-round. The goal is to break the relentless structuring of the triad - a break and not a compromise (Memmi, 1991). Breaking the settler colonial triad, in direct terms, means repatriating land to sovereign Native tribes and nations, abolition of slavery in its contemporary forms, and the dismantling of the imperial metropole. **Decolonization “here” is intimately connected to anti-imperialism elsewhere. However, decolonial struggles here/there are not parallel, not shared equally, nor do they bring neat closure to the concerns of all involved - particularly not for settlers.** Decolonization is not equivocal to other anti-colonial struggles. It is incommensurable. **There is so much that is incommensurable, so many overlaps that can’t be figured, that cannot be resolved.** **Settler colonialism fuels imperialism all around the globe.** Oil is the motor and motive for war and so was salt, so will be water. Settler sovereignty over these very pieces of earth, air, and water is what makes possible these imperialisms. The same yellow pollen in the water of the Laguna Pueblo reservation in New Mexico, Leslie Marmon Silko reminds us, is the same uranium that annihilated over 200,000 strangers in 2 flashes. The same yellow pollen that poisons the land from where it came. Used in the same war that took a generation of young Pueblo men. Through the voice of her character Betonie, Silko writes, “Thirty thousand years ago they were not strangers. You saw what the evil had done; you saw the witchery ranging as wide as the world" (Silko, 1982, p. 174). In Tucson, Arizona, where Silko lives, her books are now banned in schools. Only curricular materials affirming the settler innocence, ingenuity, and right to America may be taught. In “No”, her response to the 2003 United States invasion of Iraq, Mvskoke/Creek poet Joy Harjo (2004) writes, “Yes, that was me you saw shaking with bravery, with a government issued rifle on my back. I’m sorry I could not greet you, as you deserved, my relative.” Don’t Native Americans participate in greater rates in the military? asks the young-ish man from Viet Nam. **“Indian Country” was/is the term used in Viet Nam, Afghanistan, Iraq by the U.S. military for ‘enemy territory’.** The first Black American President said without blinking, “There was a point before folks had left, before we had gotten everybody back on the helicopter and were flying back to base, where they said Geronimo has been killed, and Geronimo was the code name for bin Laden.” Elmer Pratt, Black Panther leader, falsely imprisoned for 27 years, was a Vietnam Veteran, was nicknamed ‘Geronimo’. Geronimo is settler nickname for the Bedonkohe Apache warrior who fought Mexican and then U.S. expansion into Apache tribal lands. The Colt .45 was perfected to kill Indigenous people during the ‘liberation’ of what became the Philippines, but it was first invented for the ‘Indian Wars’ in North America alongside The Hotchkiss Canon- a gattling gun that shot canonballs. **The technologies of the permanent settler war are reserviced for foreign wars, including boarding schools, colonial schools, urban schools run by military personnel.** It is properly called Indian Country. Ideologies of US settler colonialism directly informed Australian settler colonialism. South African apartheid townships, the kill-zones in what became the Philippine colony, then nation-state, the checkerboarding of Palestinian land with checkpoints, were modeled after U.S. seizures of land and containments of Indian bodies to reservations. The racial science developed in the U.S. (a settler colonial racial science) informed Hitler’s designs on racial purity (“This book is my bible” he said of Madison Grant’s The Passing of the Great Race). The admiration is sometimes mutual, the doctors and administrators of forced sterilizations of black, Native, disabled, poor, and mostly female people - The Sterilization Act accompanied the Racial Integrity Act and the Pocohontas Exception - praised the Nazi eugenics program. Forced sterilizations became illegal in California in 1964.

#### The role of debate is to disrupt settler logics that produce epistemic or material violence – we control the question of uniqueness as academic institutions are currently saturated with anti-indigenous sentimentality – decolonization is the only ethical demand your ballot should be oriented towards

#### The alternative demands a radical reconfiguration of the terms of debate that calls into question modern understandings of space within academia – refusal to conform to the rules of the game is necessary to destabilize structures of control.

Walter Mignolo 13, William H. Wannamaker Professor of Literature and Romance Studies @ Duke, B.A. in philosophy @ Universidad Nacional de Cordoba, Ph.D. @ Ecole des Hautes Etudes, 2013, “Epistemic Disobedience, Independent Thought and De-Colonial Freedom,” *Theory, Culture and Society* Vol 26:(7-8), pg. 4-5, gender modified

The introduction of geo-historical and bio-graphical configurations in processes of knowing and understanding allows for a radical re-framing (e.g. de-colonization) of the original formal apparatus of enunciation.2 I have been supporting in the past those who maintain that it is not enough to change the content of the conversation, that it is of the essence to change the terms of the conversation. Changing the terms of the conversation implies going beyond disciplinary or interdisciplinary controversies and the conflict of interpretations. As far as controversies and interpretations remain within the same rules of the game (terms of the conversation), the control of knowledge is not called into question. And in order to call into question the modern/colonial foundation of the control of knowledge, it is necessary to focus on the knower rather than on the known. It means to go to the very assumptions that sustain locus enunciations. In what follows I revisit the formal apparatus of enunciation from the perspective of geo- and bio-graphic politics of knowledge. My revisiting is epistemic rather than linguistic, although focusing on the enunciation is unavoidable if we aim at changing the terms and not only the content of the conversation. The basic assumption is that the knower is always implicated, geo- and body-politically, in the known, although modern epistemology (e.g. the hubris of the zero point) managed to conceal both and created the figure of the detached observer, a neutral seeker of truth and objectivity who at the same time controls the disciplinary rules and puts ~~himself or herself~~ [themselves] in a privileged position to evaluate and dictate. The argument is structured as follows. Sections I and II lay out the ground for the politics of knowledge geo-historically and bio-graphically, contesting the hegemony of zero point epistemology. In Section III, I explore three cases in which geo- and body-politics of knowledge comes forcefully to the fore: one from Africa, one from India and the third from New Zealand. These three cases are complemented by a fourth from Latin America: my argument is here. It is not the report of a detached observer but the intervention of a de-colonial project that ‘comes’ from South America, the Caribbean and Latinidad in the US. Understanding the argument implies that the reader will shift its geography of reasoning and of evaluating arguments. In Section IV, I come back to geo- and body-politics of knowledge and their epistemic, ethical and political consequences. In Section V, I attempt to pull the strings together and weave my argument with the three cases explored, hoping that what I say will not be taken as the report of a detached observed but as the intervention of a de-colonial thinker.

## 1NC -- Case

### 1NC -- Framing

#### Prioritizing extinction infinitely defers a meaningful reckoning with settler colonialism

Dalley, 18—Assistant Professor of English at Daemen College (Hamish, “The deaths of settler colonialism: extinction as a metaphor of decolonization in contemporary settler literature,” Settler Colonial Studies, 8:1, 30-46, dml)

In this way, these settler-colonial narratives of extinction begin as a contemplation of endings and end as a way for settlers to persist. As in the classical solution to the settler-colonial paradox of origins, the native must be invoked and disavowed, and ultimately absorbed into the settler-colonial body as a means of accessing true belonging and the possibility of an authentic future in place. Veracini’s description of the settler-colonial historical imagination thus applies, in modified but no less appropriate form, to visions of futurity haunted by the possibility of death: Settler colonial themes include the perception of an impending catastrophe that prompts permanent displacement, the tension between tradition and adaptation and between sedentarism and nomadism, the transformative permanent shift to a new locale, the prospect of a safe ‘new land’, and the familial reproductive unit that moves as one and finally settles an arcadia that is conveniently empty.67 And yet that parallel means that it is not entirely true to say that settlers cannot contemplate a future without themselves, or that they lack the metaphorical resources to imagine their own demise. It is in fact characteristic of settler consciousness to continually imagine the end. But it does so through a paradox that echoes the ambivalence of Freud’s death drive: it is a fantasy of extinction that tips over into its opposite and becomes a method of symbolic preservation, a technique for delaying the end, for living on in the contemplation of death.68 The settler desire for death conceals that wish – the hope that, between the thought of the end and the act, someone will intervene, something will happen to show that it is not really necessary, that the settlers can stay, that they have value and can go on living. In this way, they make their own redemption, an extinction that is an act of self-preservation, deferring the hard reckoning we know we lack the courage to face, and avoid making the real changes – material, political, constitutional, practical – that might alter our condition of being and set us on the path to a real home in the world. We dream instead of ends, imagining worlds without us, thinking of what it would be like not to be. But at every moment we know that that the dream is nothing but a dream; we know we will awake and still be here, unchanged, unchanging, living on, forever. Thus settlers persist even beyond the moment of extinction they thought they wanted to arrive.

#### The footnoting of Native people and concerns under a broader umbrella of social or racial redress is a tokenizing gesture that attempts to assimilate Native people into a settler colonial version of equity rather than attending to specific needs and demands of Native people. It is a move to innocence that exists across Settler policy and educational literature.

Tuck & Yang 12 [Eve Tuck is Associate Professor of Critical Race and Indigenous Studies at the Ontario Institute for Studies in Education (OISE), University of Toronto. She is Canada Research Chair of Indigenous Methodologies with Youth and Communities. K. Wayne Yang writes about decolonization and everyday epic organizing, particularly from underneath ghetto colonialism, often with his frequent collaborator, Eve Tuck. Currently, they are convening The Land Relationships Super Collective, editing the book series, Indigenous and Decolonizing Studies in Education, and editing the journal, Critical Ethnic Studies. He is interested in the complex role of cities in global affairs: cities as sites of settler colonialism, as stages for empire, as places of resettlement and gentrification, and as always-already on Indigenous lands. \*Sometimes he writes as la paperson, an avatar that irregularly calls.“Decolonization is not a metaphor,” *Decolonization: Indigeneity, Education & Society* Vol 1 No 1 (2012) //tjb]

This settler move to innocence is concerned with the ways in which Indigenous peoples are counted, codified, represented, and included/disincluded by educational researchers and other social science researchers. **Indigenous peoples are rendered visible in mainstream educational research in two main ways: as “at risk” peoples and as asterisk peoples.** **This comprises a settler move to innocence because it erases and then conceals the erasure of Indigenous peoples within the settler colonial nation-state and moves Indigenous nations as “populations” to the margins of public discourse.**  **As “at risk” peoples, Indigenous students and families are described as on the verge of extinction, culturally and economically bereft, engaged or soon-to-be engaged in self-destructive behaviors which can interrupt their school careers and seamless absorption into the economy.** Even though it is widely known and verified that Native youth gain access to personal and academic success when they also have access to/instruction in their home languages, most Native American and Alaskan Native youth are taught in English-only schools by temporary teachers who know little about their students’ communities (Lomawaima and McCarty, 2006; Lee, 2011). Even though Indigenous knowledge systems predate, expand, update, and complicate the curricula found in most public schools, schools attended by poor Indigenous students are among those most regimented in attempts to comply with federal mandates. Though these mandates intrude on the sovereignty of Indigenous peoples, the “services” promised at the inception of these mandates do little to make the schools attended by Indigenous youth better at providing them a compelling, relevant, inspiring and meaningful education. **At the same time, Indigenous communities become the asterisk peoples, meaning they are represented by an asterisk in large and crucial data sets, many of which are conducted to inform public policy that impact our/their lives** (Villegas, 2012)**.** Education and health statistics are unavailable from Indigenous communities for a variety of reasons and, when they are made available, the size of the n, or the sample size, can appear to be negligible when compared to the sample size of other/race-based categories. Though Indigenous scholars such as Malia Villegas recognize that Indigenous peoples are distinct from each other but also from other racialized groups surveyed in these studies, they argue that difficulty of collecting basic education and health information about this small and heterogeneous category must be overcome in order to counter the disappearance of Indigenous particularities in public policy. In U.S. educational research in particular, Indigenous peoples are included only as asterisks, as footnotes into dominant paradigms of educational inequality in the U.S. **This can be observed in the progressive literature on school discipline, on ‘underrepresented minorities’ in higher education, and in the literature of reparation, i.e., redressing ‘past’ wrongs against nonwhite Others**. **Under such paradigms, which do important work on alleviating the symptoms of colonialism (poverty, dispossession, criminality, premature death, cultural genocide), Indigeneity is simply an “and” or an illustration of oppression.** ‘Urban education’, for example, is a code word for the schooling of black, brown, and ghettoized youth who form the numerical majority in divested public schools. Urban American Indians and Native Alaskans become an asterisk group, invisibilized, even though about two-thirds of Indigenous peoples in the U.S. live in urban areas, according to the 2010 census. Yet, urban Indians receive fewer federal funds for education, health, and employment than their counterparts on reservations (Berry, 2012). Similarly, Native Pasifika people become an asterisk in the Asian Pacific Islander category and their politics/epistemologies/experiences are often subsumed under a pan-ethnic Asian-American master narrative. **From a settler viewpoint that concerns itself with numerical inequality, e.g. the achievement gap, underrepresentation, and the 99%’s short share of the wealth of the metropole, the asterisk is an outlier, an outnumber.** It is a token gesture, an inclusion and an enclosure of Native people into the politics of equity. These acts of inclusion assimilate Indigenous sovereignty, ways of knowing, and ways of being by remaking a collective-comprised tribal identity into an individualized ethnic identity. From a decolonizing perspective, the asterisk is a body count that does not account for Indigenous politics, educational concerns, and epistemologies. Urban land (indeed all land) is Native land. The vast majority of Native youth in North America live in urban settings. Any decolonizing urban education endeavor must address the foundations of urban land pedagogy and Indigenous politics vis-a-vis the settler colonial state.

### 1NC -- Space Col Fails

#### Space colonization is infeasible – resource constraints and unlivable planetary conditions.

Dvorsky, '19 (George Dvorsky; Senior staff reporter at Gizmodo specializing in astronomy, space exploration, SETI, archaeology, bioethics, animal intelligence, human enhancement, and risks posed by AI and other advanced tech; Gizmodo; "Humans Will Never Colonize Mars;" ; https://gizmodo.com/humans-will-never-colonize-mars-1836316222; 7-30-2019, Accessed 6-27-2021)//ILake-NoC

The Red Planet is a cold, dead place, with an atmosphere about 100 times thinner than Earth’s. The paltry amount of air that does exist on Mars is primarily composed of noxious carbon dioxide, which does little to protect the surface from the Sun’s harmful rays. Air pressure on Mars is very low; at 600 Pascals, it’s only about 0.6 percent that of Earth. You might as well be exposed to the vacuum of space, resulting in a severe form of the bends—including ruptured lungs, dangerously swollen skin and body tissue, and ultimately death. The thin atmosphere also means that heat cannot be retained at the surface. The average temperature on Mars is -81 degrees Fahrenheit (-63 degrees Celsius), with temperatures dropping as low as -195 degrees F (-126 degrees C). By contrast, the coldest temperature ever recorded on Earth was at Vostok Station in Antarctica, at -128 degrees F (-89 degrees C) on June 23, 1982. Once temperatures get below the -40 degrees F/C mark, people who aren’t properly dressed for the occasion can expect hypothermia to set in within about five to seven minutes. The notion that we’ll soon set up colonies inhabited by hundreds or thousands of people is pure nonsense. Mars also has less mass than is typically appreciated. Gravity on the Red Planet is 0.375 that of Earth’s, which means a 180-pound person on Earth would weigh a scant 68 pounds on Mars. While that might sound appealing, this low-gravity environment would likely wreak havoc to human health in the long term, and possibly have negative impacts on human fertility. Yet despite these and a plethora of other issues, there’s this popular idea floating around that we’ll soon be able to set up colonies on Mars with ease. SpaceX CEO Elon Musk is projecting colonies on Mars as early as the 2050s, while astrobiologist Lewis Darnell, a professor at the University of Westminster, has offered a more modest estimate, saying it’ll be about 50 to 100 years before “substantial numbers of people have moved to Mars to live in self-sustaining towns.” The United Arab Emirates is aiming to build a Martian city of 600,000 occupants by 2117, in one of the more ambitious visions of the future. Sadly, this is literally science fiction. While there’s no doubt in my mind that humans will eventually visit Mars and even build a base or two, the notion that we’ll soon set up colonies inhabited by hundreds or thousands of people is pure nonsense, and an unmitigated denial of the tremendous challenges posed by such a prospect. Pioneering astronautics engineer Louis Friedman, co-founder of the Planetary Society and author of Human Spaceflight: From Mars to the Stars, likens this unfounded enthusiasm to the unfulfilled visions proposed during the 1940s and 1950s. “Back then, cover stories of magazines like Popular Mechanics and Popular Science showed colonies under the oceans and in the Antarctic,” Friedman told Gizmodo. The feeling was that humans would find a way to occupy every nook and cranny of the planet, no matter how challenging or inhospitable, he said. “But this just hasn’t happened. We make occasional visits to Antarctica and we even have some bases there, but that’s about it. Under the oceans it’s even worse, with some limited human operations, but in reality it’s really very, very little.” As for human colonies in either of these environments, not so much. In fact, not at all, despite the relative ease at which we could achieve this. After the Moon landings, Friedman said he and his colleagues were hugely optimistic about the future, believing “we would do more and more things, such as place colonies on Mars and the Moon,” but the “fact is, no human spaceflight program, whether Apollo, the Space Shuttle Program, or the International Space Station,” has established the necessary groundwork for setting up colonies on Mars, such as building the required infrastructure, finding safe and viable ways of sourcing food and water, mitigating the deleterious effects of radiation and low gravity, among other issues. Unlike other fields, development into human spaceflight, he said, “has become static.” Friedman agreed that we’ll likely build bases on Mars, but the “evidence of history” suggests colonization is unlikely for the foreseeable future. Neuroscientist Rachael Seidler from the University of Florida says many people today fail to appreciate how difficult it’ll be to sustain colonies on the Red Planet. “That’s thousands of years in the making at least.” “People like to be optimistic about the idea of colonizing Mars,” Seidler, a specialist in motor learning and the effects of microgravity on astronauts, told Gizmodo. “But it also sounds a bit pie-in-the-sky,” she said. “A lot of people approach it as thinking we shouldn’t limit ourselves based on practicalities, but I agree, there are a lot of potential negative physiological consequences.” Seidler said NASA and other space agencies are currently working very hard to create and test countermeasures for the various negative impacts of living on Mars. For example, astronauts on the ISS, who are subject to tremendous muscle and bone loss, try to counteract the effects by doing strength and aerobic training while up in space. As for treating the resulting negative health impacts, whether caused by long-duration stays on the ISS or from long-term living in the low-gravity environment of Mars, “we’re not there yet,” said Seidler. In his latest book, On the Future: Prospects for Humanity, cosmologist and astrophysicist Martin Rees addressed the issue of colonizing Mars rather succinctly: By 2100 thrill seekers... may have established ‘bases’ independent from the Earth—on Mars, or maybe on asteroids. Elon Musk (born in 1971) of SpaceX says he wants to die on Mars—but not on impact. But don’t ever expect mass emigration from Earth. And here I disagree strongly with Musk and with my late Cambridge colleague Stephen Hawking, who enthuse about rapid build-up of large-scale Martian communities. It’s a dangerous delusion to think that space offers an escape from Earth’s problems. We’ve got to solve these problems here. Coping with climate change may seem daunting, but it’s a doddle compared to terraforming Mars. No place in our solar system offers an environment even as clement as the Antarctic or the top of Everest. There’s no ‘Planet B’ for ordinary risk-averse people. Indeed, there’s the whole terraforming issue to consider. By terraforming, scientists are referring to the hypothetical prospect of geoengineering a planet to make it habitable for humans and other life. For Mars, that would mean the injection of oxygen and other gases into the atmosphere to raise surface temperature and air pressure, among other interventions. A common argument in favor of colonizing Mars is that it’ll allow us to begin the process of transforming the planet to a habitable state. This scenario has been tackled by a number of science fiction authors, including Kim Stanley Robinson in his acclaimed Mars Trilogy. But as Friedman told Gizmodo, “that’s thousands of years in the making at least.” Briony Horgan, assistant professor of planetary science at Purdue University, said Martian terraforming is a pipedream, a prospect that’s “way beyond any kind of technology we’re going to have any time soon,” she told Gizmodo. When it comes to terraforming Mars, there’s also the logistics to consider, and the materials available to the geoengineers who would dare to embark upon such a multi-generational project. In their 2018 Nature paper, Bruce Jakosky and Christopher Edwards from the University of Colorado, Boulder sought to understand how much carbon dioxide would be needed to increase the air pressure on Mars to the point where humans could work on the surface without having to wear pressure suits, and to increase temperature such that liquid water could exist and persist on the surface. Jakosky and Edwards concluded that there’s not nearly enough CO2 on Mars required for terraforming, and that future geoengineers would have to somehow import the required gases to do so.

### 1NC -- Root Cause

#### Neoliberalism is constituted by Settler Colonialism—even if late capitalism operates differently than traditional colonization, refusing western conceptions of place, particularly in the context of education, allows indigenous modes of thinking and living to flourish. A shift in place is a pre-requisite to destroying the structural logics of capitalism.

Koushik 2016 (Jada Renee, Ph.D Candidate @ the University of Saskatchewan, “Considerations of place in sustainability education policy: How local contexts inform the engagement of sustainability in education policy enactment and practice”, published in Journal of Sustainability Education Vol. 11, February 2016) cut- MS

There are many connections between capital and place, and places are in competition with other places for highly mobile resources (Cresswell, 2004). Capitalism is dependent on its spatial fixes, and it “builds and rebuilds a geography in its own image” (Harvey, 2000, p. 54). The tension between capital and place is accentuated by neoliberal policies and discourses, many of which seek to commodify places and re-story histories to align with trends in extraction and consumption. The term neoliberalism is used to describe the currently dominant system of global governance that promotes free market conditions that “prioritize corporations and economic growth over considerations of social equity or environmental protection” (Tuck & McKenzie, 2015, p. 3). In today’s society, regrettably, commodifying everything and subjecting almost all transactions to a cost-benefit analysis is the dominant way of thinking (Harvey, 2000). Moreover, “[n]eoliberalism builds on a western trajectory of cultural norms and practices” (McKenzie, 2012, p. 165), while neo-liberal policy agendas have brought to light differentiating spatial effects of unequal provision (Gulson & Symes, 2007). An example of how power influences place can be witnessed amongst Native American and First Nations students living in the United States and Canada, whereby the scientific method/Western worldview oftentimes coexists with Native spiritually along with a deep connection with the land and animals. In this vein, power represents “the living energy that inhabits and/or composes the universe, and place being the relationship of things to each other” (Deloria, 2001, p. 23). The connections that Indigenous people have to places are undeniably some of the strongest in the world. As such, “Indigenous people represent a culture emergent from a place, and they actively draw on the power of that place, physically and spiritually” (Wildcat, 2001a, p. 32). Furthermore, tribal persons “find meaning in the world and recognize through experience that they are of a people and place” (Wildcat, 2001b, p. 145). This enduring sense of place within Indigenous communities is not static, instead place serves as a location for “contemporary Indigenous knowledge and language practices to comingle with others, change, and yet persist” (Hornberger & McCarty, 2012, p. 6). Many Indigenous epistemologies view the world as a dynamic and living place, but many of these perspectives have been challenged and/or supplanted by dominant European/Western worldviews (Lucas, 2013). Indigenous communities use place/land as central reference point; in contrast, Western communities use time as the narrative of central importance (Coulthard, 2010). Through the processes of colonialism, Europeans worldview became known as The World History, displacing all other experiences and cultural histories around the globe (Deloria, 2001; Simpson, 2002). This has had a devastating impact on how we view and interact with places, since most times the Western worldview is unable to understand any other history, as it is the “truth” and superior to all others (Deloria, 2001; Lucas, 2013). “Until relatively recently in human history, the social activities through which distinctive forms of knowledge are produced have for the most part been localized” (Gough, 2002, p. 1223). Unfortunately, colonization has allowed Western thought to travel around the world, appearing to be devoid of any one cultural fingerprint; an undeniable universal truth and rational way of thinking (Gough, 2002). While this Western conception of place, rooted in the power of colonialism and resource extraction, narrows the possibilities of how humans interact in and with places; the history of colonization and cultural oppression creates a context for shared experiences that tie identity to place (Kana’iaupuni & Malone, 2010). Wildcat (2001b) posits that “[p]lace is not merely the relationship of things, resources or objects, it is the site where dynamic processes of interaction occur -where processes between other living beings or other-than-human persons occur” (p. 144). Thus, “[e]ducation space is therefore revealed as fluid, interconnected and constructed through power relations” (Cook & Hemming, 2011, p. 6). Coulthard (2010) states that “[p]lace is a way of knowing, experiencing, and relating with the world – and these ways of knowing often guide forms of resistance to power relations that threaten to erase or destroy our senses of place” (p. 79). This resistance to power is articulated by arguing against the contemporary pathological drive for expansion, growth, and accumulation (colonial-capitalist ideologies). Coulthard (2010) stresses the importance of sharing, egalitarianism, respect for one another and the land, and autonomy, thus nurturing a sense of place. Sense of place research considers how people connect with places and how those connections influence their sentiments and behaviours towards the environment, which may have significant implications for sustainability education (Ardoin, Schuch & Gould, 2012).