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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 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.

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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.

#### The 1AC’s move to secure US military satellites from emerging threats is grounded in the logics of settler empire that generates a perpetual state of warfare to justify the limitless violence necessary that sustains it – imperial aggression is predicated on the expansion and protection of settler sovereignty.

**Inwood & Bonds ’16** (Joshua Inwood & Anne Bonds, 17 March 2016, Confronting White Supremacy and a Militaristic Pedagogy in the U.S. Settler Colonial State, Annals of the American Association of Geographers, DOI: 10.1080/24694452.2016.1145510) //cut-NR

The analytic of militarism requires first a focus on the United States as produced through settler colonialism (Morgensen 2011; Smith 2012; Hixson 2013; Veracini 2013). A. Bonds and Inwood (2015) explained settler colonialism as a continuously unfolding project of empire that is enabled by and through specific racial configurations that are tied to geographies of white supremacy. In a U.S. context, settler colonialism begins with the removal of first peoples from the land and the creation of racialized and gendered labor systems that make the land productive for the colonizers. This includes the removal of Native peoples and geographies of indentured servitude, slavery, sharecropping, and, more contemporarily, urban abandonment and practices of mass imprisonment. Settler colonialism, therefore, emphasizes the ongoing processes of racialized capital accumulation and displacement necessary to sustain the permanent occupation of a territory. In this sense, it is an enduring structure—an interrelated political, social, and economic process that continuously unfolds—requiring continued reconfigurations and interventions by the state (Wolfe 2006). Because of the constant reworking of social and political economic hierarchies necessary to sustain settler relations, this sociospatial dialectic is central to understanding how particular place-based configurations of race, class, ethnicity, and gender come to predominate in the United States (for a broader discussion see S. Hall 1996; Gilmore 1999; A. Bonds and Inwood 2015). According to Smith (2012), settler colonialism is sustained by three primary logics that enshrine white supremacy. The first of these logics is that of slavery, which is usually premised on the enslavement of black people, the devaluation of black life, and the racialized political economy established through this system. Rather than being located in the past, the logic of slavery mutates and mobilizes across time and space, systematized through various structures of social control that dispossess and retain black bodies as permanent property of the state. This logic connects slavery, sharecropping, welfare programs, and mass imprisonment (Smith 2012). The logic of slavery rationalizes racial exploitation and is the cornerstone for the very notion of private property. As Harris (1993) argued, “The origins of property rights in the United States are rooted in racial domination” (1734) that is connected to slavery and gives rise to a very specific form of U.S.-style political economy built on and through the subordination of persons of color. Thus, slavery introduces into the life of the nation the routine and naturalized “statesanctioned or extralegal production and exploitation of group-differentiated vulnerability to premature death” that is the heart of U.S.-style racism (Gilmore 2007, 28). The associated practices and systems not only justify death as the “collateral consequences” of U.S. development, but they undergird the social and premature death of structural racism (Gilmore 2007). A second and interconnected logic is genocide, premised on the ongoing disappearance of indigenous peoples in support of the appropriation and privatization of indigenous lands (Smith 2012). Genocide sustains a spatial politics of erasure and exclusion, institutionalized by state practices that justify indigenous removal and settler land claims. The practices of genocide are animated by and through logics of private property that connect geographies of indigenous disappearance with labor systems meant to make the land productive. Finally, a third pillar is orientalism, grounded in the belief of the inferiority and threatening menace of non-Western nations and peoples (Smith 2012).1 This introduces into the United States a state of permanent warfare in which the nation is consistently besieged by enemies (externally and internally); as a consequence, there is a constant need to protect “the well-being of empire” (Smith 2012, 69). The foundational rationales of slavery, genocide, and orientalism contour the white supremacist settler state: The founding moments of US nationalism [meaning the social and cultural identity of the nation] are foundational to both state and culture. The US was conceived in slavery and christened by genocide. These early practices established high expectations of state aggression against enemies of the national purpose and that valorized armed men in uniform as the nation’s true sacrificial subjects. (Gilmore 2002, 20) These logics are reformulated and continue to take shape in an era of ostensible color-blindness predominated by official discourses and government commitments to racial equality. Even as overt racism is eschewed, taken for granted socioeconomic hierarchies, racial exploitation, and the redistribution of wealth reproduce and sustain white supremacy. The U.S. settler state internalizes a “righteous violence” predicated on an expanding “quest for total security” that has come to characterize domestic and foreign policy (Hixson 2013, 198). Although there are myriad ways to explore the interrelations between state-sanctioned violence and militarism, we find the connections between domestic policing and the U.S. military-industrial complex to be particularly illustrative. Kraska and Cubellis (1997) noted that there is a long history of collusion between the military and police departments in the United States and the military paradigm is an important organizing principle within the development of modern policing practices, organization, and tactics (e.g., Bittner 1970; Manning 1977; Enloe 1980; A. Hall and Coyne 2012). These practices took on added significance during the latter half of the twentieth century as U.S. cities faced increased pressure to “get tough on crime” and as local police departments developed specially trained tactical teams, commonly referred to as Special Weapons and Tactics (SWAT) teams (Kraska and Cubellis 1997). The interactions between the military and domestic police practices intensified yet again during the “war on drugs” and in a post–11 September 2001 world where domestic terror concerns have fueled the explosive growth of military and police cooperation (A. Hall and Coyne 2012). Although ostensibly unconnected to questions of race and economic inequality, militarism is fundamentally linked to structural violences of poverty and social difference (Loyd 2009, 2014), and the pursuit of total security connects settler state militarism across scales, legitimating the expansion and protection of the nation-state, the policing of its borders and communities, and internal and external monitoring and surveillance in the name of defense. Securing the white supremacist settler state relies on racial, gender, and class hierarchies that enable the coherence of an imagined nation with clearly marked inclusions and exclusions. That is, the targeted and widespread violence that characterizes the U.S. settler state—seen in everything from the genocide directed toward Native peoples to the criminalization of communities of color—depends on and reinforces discursive constructions that demonize those who stand in the way of the settler state and, more often than not, culminates in national campaigns against those beyond the scope of U.S. settler state justice. The indiscriminate killing associated with this kind of violence is easily dismissed as an unfortunate consequence of war (Hixson 2013). U.S. interventionism relies on a “defensive solidarity ... built on the institution of slavery and the racialization of Blackness” that reaffirms white supremacist cultural identity by managing both internal and external threats (Loyd 2009, 406). These practices continue even after the settler state has displaced and “removed” native peoples who had previously occupied the land, creating political landscapes with an aggressive propensity for violence (Veracini 2010). This understanding of the United States as a settler state is significant for theorizing militarism, we argue, because it situates the persistent violences of genocide and slavery as enduring structures shaping social and political economic relations. Rather than being projects of the past, settler practices are central to the continued development and futurity of the United States. A settler colonial perspective disrupts the spatial imaginaries of war by emphasizing the ongoing racialized violence necessary to secure contested, although taken for granted, homelands in settler nations. Moreover, it connects the indiscriminate violence stretching from U.S. settler colonial history to contemporary military engagements (Hixson 2013). As Blackhawk and Apache helicopters swoop and attack and Tomahawk cruise missiles explode, and as U.S. Special Forces head into “Indian country” to search and destroy the enemy, the ramifications and taken for granted sensibilities of settler geographies become all too clear (Hixson 2013, 198). Hixson (2013) further clarified, “American settler colonialism is a winnertakes-all proposition that demanded the removal of indigenous peoples and the destruction of their cultures,” and these geographies have “profound consequences for national identity and subsequent foreign policy” (197). The settler state is premised on permanent war, inscribing militarism and violence into everyday geographies and naturalizing racialized power hierarchies and the dispossession and erasure of racialized bodies

#### 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

## 1NC – Case

### 1NC -- Framing

#### Their fantasies of extinction scenarios infinitely defer 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.

### 1NC – Method

#### **The Lake card is about researchers who actually have the ability to create material progress – we do not, within debate the only progress we can make is changes to the ethical alignments we adopt towards things like settler colonialism that operate on the level of discourse in this space**

#### Barma is not a defense of policy analysis, it is a defense of envisioning alternative futures – there is no reaosn why those futures should involved the continuation of settler sovereignty

#### The Weber card – jut says that in catastrophic situations the government often fails toa ct and is immobilized by uncertainty – that isn’t a warrant for why public consciousness surrounding extinction scenarios has a material effect – negilgient governments cannot be solved by imagining a world in which they take action – the card indicts people having negative emotional reactions to considering risk which is obviously not the k – settler colonialism is a material structure of dispossession not just an emotional appeal

#### **Discourse comes first –only 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 -- Mining

#### 1. No Kessler effect.

von Fange 17 [Daniel Von Fange‏, Distributed systems engineer, “Kessler Syndrome is Over Hyped” May 21st 2017, <http://braino.org/essays/kessler_syndrome_is_over_hyped/>] [modified for readability]

The orbital area around earth can be broken down into four regions. Low LEO - Up to about 400km. Things that orbit here burn up in the earth’s atmosphere quickly - between a few months to two years. The space station operates at the high end of this range. It loses about a kilometer of altitude a month and if not pushed higher every few months, would soon burn up. For all practical purposes, Low LEO doesn’t matter for Kessler Syndrome. If Low LEO was ever full of space junk, we’d just wait a year and a half, and the problem would be over. High LEO - 400km to 2000km. This where most heavy satellites and most space junk orbits. The air is thin enough here that satellites only go down slowly, and they have a much farther distance to fall. It can take 50 years for stuff here to get down. This is where Kessler Syndrome could be an issue. Mid Orbit - GPS satellites and other navigation satellites travel here in lonely, long lives. The volume of space is so huge, and the number of satellites so few, that we don’t need to worry about Kessler here. GEO - If you put a satellite far enough out from earth, the speed that the satellite travels around the earth will match the speed of the surface of the earth rotating under it. From the ground, the satellite will appear to hang motionless. Usually the geostationary orbit is used by big weather satellites and big TV broadcasting satellites. (This apparent motionlessness is why satellite TV dishes can be mounted pointing in a fixed direction. You can find approximate south just by looking around at the dishes in your northern hemisphere neighborhood.) For Kessler purposes, GEO orbit is roughly a ring 384,400 km around. However, all the satellites here are moving the same direction at the same speed - debris doesn’t get free velocity from the speed of the satellites. Also, it’s quite expensive to get a satellite here, and so there aren’t many, only about one satellite per [one thousand kilometers] of the ring. Kessler is not a problem here. How bad could Kessler Syndrome in High LEO be? Let’s imagine a worst case scenario. An evil alien intelligence chops up everything in High LEO, turning it into 1cm cubes of death orbiting at 1000km, spread as evenly across the surface of this sphere as orbital mechanics would allow. Is humanity cut off from space? I’m guessing the world has launched about 10,000 tons of satellites total. For guessing purposes, I’ll assume 2,500 tons of satellites and junk currently in High LEO. If satellites are made of aluminum, with a density of 2.70 g/cm3, then that’s 839,985,870 1cm cubes. A sphere for an orbit of 1,000km has a surface area of 682,752,000 square KM. So there would be one cube of junk per .81 square KM. If a rocket traveled through that, its odds of hitting that cube are tiny - less than [one in ten thousand]. So even in the worst case, we don’t lose access to space. Now though you can travel through the debris, you couldn’t keep a satellite alive for long in this orbit of death. Kessler Syndrome at its worst just prevents us from putting satellites in certain orbits. In real life, there’s a lot of factors that make Kessler syndrome even less of a problem than our worst case though experiment. Debris would be spread over a volume of space, not a single orbital surface, making collisions orders of magnitudes less likely. Most impact debris will have a slower orbital velocity than either of its original pieces - this makes it deorbit much sooner. Any collision will create large and small objects. Small objects are much more affected by atmospheric drag and deorbit faster, even in a few months from high LEO. Larger objects can be tracked by earth based radar and avoided. The planned big new constellations are not in High LEO, but in Low LEO for faster communications with the earth. They aren’t an issue for Kessler. Most importantly, all new satellite launches since the 1990’s are required to include a plan to get rid of the satellite at the end of its useful life (usually by deorbiting) So the realistic worst case is that insurance premiums on satellites go up a bit. Given the current trend toward much smaller, cheaper micro satellites, this wouldn’t even have a huge effect. I’m removing Kessler Syndrome from my list of things to worry about.

#### 2. No debris collision

Albrecht 16 [Mark Albrecht is chairman of the board of USSpace LLC. He was head of the White House National Space Council from 1989 to 1992. Paul Graziani is CEO and founder of Analytical Graphics, an Exton, Pennsylvania, company that develops software and provides mission assurance through the Commercial Space Operations Center (ComSpOC), “Op-ed | Congested space is a serious problem solved by hard work, not hysteria”, SpaceNews, May 9th 2016, <https://spacenews.com/op-ed-congested-space-is-a-serious-problem-solved-by-hard-work-not-hysteria/>] [modified for readability]

Popular culture has embraced the risks of collisions in space in films like Gravity. Some participants have dramatized the issue by producing graphics of Earth and its satellites, which make our planet look like a fuzzy marble, almost obscured by a dense cloud of white pellets meant to conceptualize space congestion. Unfortunately, for the sake of a good visual, satellites are depicted as if they were hundreds of miles wide, like the state of Pennsylvania (for the record, there are no space objects the size of Pennsylvania in orbit). Unfortunately, this is the rule, not the exception, and almost all of these articles, movies, graphics, and simulations are exaggerated and misleading. Space debris and collision risk is real, but it certainly is not a crisis. So what are the facts? On the positive side, space is empty and it is vast. At the altitude of the International Space Station, one half a degree of Earth longitude is almost 40 miles long. That same one half a degree at geostationary orbit, some 22,000 miles up is over 230 miles long. Generally, we don’t intentionally put satellites closer together than one-half degree. That means at geostationary orbit, they are no closer than 11 times as far as the eye can see on flat ground or on the sea: That’s the horizon over the horizon 10 times over. In addition, other than minute forces like solar winds and sparse bits of atmosphere that still exist 500 miles up, nothing gets in the way of orbiting objects and they behave quite predictably. The location of the smallest spacecraft can be predicated within a 1,000 feet, 24 hours in advance. Since we first started placing objects into space there have been [eleven] known low Earth orbit collisions, and three known collisions at geostationary orbit. Think of it: 135 space shuttle flights, all of the Apollo, Gemini and Mercury flights, hundreds of telecommunications satellites, [thirteen hundred] functioning satellites on orbit today, half a million total objects in space larger than a marble, and fewer than 15 known collisions. Why do people worry?

#### 3. Debris growth down

Wall 19 [Mike Wall, Ph.D, Space.com Senior Space Writer, “Space Junk Menace: New Guidelines Urged to Help Fight Orbital Debris Threat”, Space.com, Oct 15th 2019, https://www.space.com/space-junk-threat-satellites-guidelines-reduce-orbital-debris.html]

But we can stave off the Kessler syndrome — or at least minimize the odds that it happens anytime soon — if spacecraft builders and operators follow a few simple rules, according to the Space Safety Coalition (SSC). The SSC, a newly established group of space-industry stakeholders, laid out those proposed voluntary guidelines last month in a document called "Best Practices for the Sustainability of Space Operations." There are space-junk mitigation guidelines on the books already, which were drawn up by the Inter-Agency Space Debris Coordination Committee and the United Nations Committee on the Peaceful Uses of Outer Space. But those guidelines were last revised in 2007, the SSC noted. "Plans to increase our space population with more cubesats and other small satellites, as well as new, large constellations of satellites, were not envisioned when the above-mentioned guidelines and standards were established," the new "best practices" document states. "These new planned spacecraft and constellations, coupled with improvements in space situational awareness, space operations and spacecraft design, all provide an opportunity to expand upon established space operations and orbital debris mitigation guidelines and best practices." One of the key new recommendations is that all spacecraft that operate at an altitude above 250 miles (400 kilometers) should feature a propulsion system that allows them to maneuver their way out of potential collisions. That's a natural dividing line, Scott said; the International Space Station circles at about that altitude, and nobody wants out-of-control satellites falling back to Earth through the orbiting lab's path. Also, below 250 miles, there's enough atmosphere to create significant drag on spacecraft, causing them to deorbit relatively quickly when their operational lives are over. (The space community could designate the below-250-mile region an "experimental zone," Scott wrote in a recent blog post. Such a move would keep space "affordable for operators of the growing number of inexpensive, experimental or educational cubesats," he wrote.) The SSC also recommends that satellite designers consider building encryption into their command and control systems, so that spacecraft cannot be hijacked by hackers intent on causing havoc in orbit. And the best practices include anti-littering guidelines. For example, the handlers of satellites that operate in low-Earth orbit should include in their launch contracts a requirement that rocket upper stages be disposed of promptly, via a controlled reentry into Earth's atmosphere. As of today (Oct. 15), 31 space-industry stakeholders have endorsed the new guidelines. And there are some big names in that group, including Maxar (the parent company of satellite operator DigitalGlobe and the spacecraft manufacturer SSL, among other subsidiaries), OneWeb, Rocket Lab, Iridium, SES and Intelsat. "You don't want to wait for a disaster before you take action," Scott said. "It really is time, and you're seeing operators like Maxar and OneWeb being proactive."

#### Cyberwar isn’t an existential threat—best studies prove

Jason HEALEY, Director of the Cyber Statecraft Initiative at the Atlantic Council, 13 [“No, Cyberwarfare Isn't as Dangerous as Nuclear War,” March 20, 2013, www.usnews.com/opinion/blogs/world-report/2013/03/20/cyber-attacks-not-yet-an-existential-threat-to-the-us]

America does not face an existential cyberthreat today, despite recent warnings. Our cybervulnerabilities are undoubtedly grave and the threats we face are severe but far from comparable to nuclear war.

The most recent alarms come in a Defense Science Board report on how to make military cybersystems more resilient against advanced threats (in short, Russia or China). It warned that the "cyber threat is serious, with potential consequences similar in some ways to the nuclear threat of the Cold War." Such fears were also expressed by Adm. Mike Mullen, then chairman of the Joint Chiefs of Staff, in 2011. He called cyber "The single biggest existential threat that's out there" because "cyber actually more than theoretically, can attack our infrastructure, our financial systems."

While it is true that cyber attacks might do these things, it is also true they have not only never happened but are far more difficult to accomplish than mainstream thinking believes. The consequences from cyber threats may be similar in some ways to nuclear, as the Science Board concluded, but mostly, they are incredibly dissimilar.

Eighty years ago, the generals of the U.S. Army Air Corps were sure that their bombers would easily topple other countries and cause their populations to panic, claims which did not stand up to reality. A study of the 25-year history of cyber conflict, by the Atlantic Council and Cyber Conflict Studies Association, has shown a similar dynamic where the impact of disruptive cyberattacks has been consistently overestimated.

Rather than theorizing about future cyberwars or extrapolating from today's concerns, the history of cyberconflict that have actually been fought, shows that cyber incidents have so far tended to have effects that are either widespread but fleeting or persistent but narrowly focused. No attacks, so far, have been both widespread and persistent. There have been no authenticated cases of anyone dying from a cyber attack. Any widespread disruptions, even the 2007 disruption against Estonia, have been short-lived causing no significant GDP loss.

Moreover, as with conflict in other domains, cyberattacks can take down many targets but keeping them down over time in the face of determined defenses has so far been out of the range of all but the most dangerous adversaries such as Russia and China. Of course, if the United States is in a conflict with those nations, cyber will be the least important of the existential threats policymakers should be worrying about. Plutonium trumps bytes in a shooting war.

This is not all good news. Policymakers have recognized the problems since at least 1998 with little significant progress. Worse, the threats and vulnerabilities are getting steadily more worrying. Still, experts have been warning of a cyber Pearl Harbor for 20 of the 70 years since the actual Pearl Harbor.

The transfer of U.S. trade secrets through Chinese cyber espionage could someday accumulate into an existential threat. But it doesn't seem so seem just yet, with only handwaving estimates of annual losses of 0.1 to 0.5 percent to the total U.S. GDP of around $15 trillion. That's bad, but it doesn't add up to an existential crisis or "economic cyberwar."

#### The aff constructs panic to clean up space debris by threatening US national security

Joseph S. Imburgia 2011 [Lieutenant Colonel Joseph S. Imburgia is a Judge Advocate in the United States Air Force and is presently assigned as a legal exchange officer to the Directorate of Operations and International Law] Space Debris and Its Threat to National Security: A Proposal for a Binding International Agreement to Clean Up the Junk. Vanderbilt Journal of Transnational Law [Vol. 44:589]

Simply put, the United States depends on space-based assets for national security, and those assets are vulnerable to space debris collisions. As Massachusetts Democratic Congressman Edward Markey stated, “American satellites are the soft underbelly of our national security.”161 The Rumsfeld Commission set the groundwork for such a conclusion in 2001, when it discussed the vulnerability of U.S. space-based assets and warned of the Space Pearl Harbor.162 Congress also recognized this vulnerability in June 2006, when it held hearings concerning space and its import to U.S. national power and security.163 In his June 2006 Congressional Statement, Lieutenant General C. Robert Kehler, then the Deputy Commander, United States Strategic Command, stated that “space capabilities are inextricably woven into the fabric of American security.”164 He added that these space capabilities are “vital to our daily efforts throughout the world in all aspects of modern warfare” and discussed how integral space capabilities are to “defeating terrorist threats, defending the homeland in depth, shaping the choices of countries at strategic crossroads and preventing hostile states and actors from acquiring or using WMD.”165 Because so much of the United States’ security depends on satellites, these integral space-based capabilities would, therefore, be costly to lose. That loss would be felt in more than just the security arena. Due to the steep price tags attached to some of the national space security platforms, the economic loss of a satellite due to space debris would also be significant. For example, a pair of new Global Positioning Satellites (GPS), which provides valuable targeting and battle space awareness to military commanders, costs $1.5 billion.166 Accordingly, if a piece of space debris destroys one of these satellites, $750 million could be lost instantly. Additionally, NASA invests billions of dollars annually in space assets. Congress provided NASA with $18.3 billion to spend on space utilization and exploration for fiscal year 2010, and it provided $17.7 billion for fiscal year 2011.167 Air Force General (retired) Ronald E. Keys, former Commander of Air Combat Command, summed it up best, stating that a great deal “rides on space-borne satellites.”168 Because these space capabilities are so costly yet so vital to the United States’ national security and economic well-being, the preservation of these space capabilities should also be vital.

#### The call to space fuels strategies of technocratic managerialism that position the American transcendental state as supreme---transcendence of limits enables imperialistic violence through intervention, war, circumvention of norms, preemption, and tactics of control

Daniel Sage 16, Senior Lecturer in Human Resource Management and Organizational Behavior at Loughborough University, Ph.D. in Political and Cultural Geographies from Loughborough University, 4/29/16, How Outer Space Made America: Geography, Organization and the Cosmic Sublime, p. 153-156

In the preceding eight chapters I have argued that some of the unique qualities of outer space—vastness, Otherness, sublimity, timelessness, spacelessness—are just as integral to extra-terrestrial projections of US geopower, as its well-known capacity (Arendt, 1963; Cosgrove, 2001; Dickens and Ormrod, 2007; Dolman, 2001; Macdonald, 2007) to function as an Archimedean high point to monitor and control the surface, and atmosphere, of the Earth. While the focus of my study has been the United States, and more specifically NASA, the implications of this cosmic projection of geopower—the American transcendental state—are global in reach, from enabling and shaping imperialistic ideologies (Chapters 1-3 and 7) to fuelling the extension of technocratic managerialism (Chapter 4-6 and 8). What is more, messianic hope in America remains a global commodity, consumed, for example, through the internationally franchised Star Trek television episodes and films (Penley, 1997: 98-99), multinational ‘Space 2.0’ corporations, like SpaceX (Chapter 6), worldwide audiences to the addresses of American presidents (Chapter 6) and global tourist attractions like the National Air and Space Museum and Kennedy Space Center Visitor Complex (Chapter 7). These global circulations suggest that while my empirical focus in this study has been on the extra-terrestrial assemblage of the American transcendental state, as viewed from within the borders of the US, the salience of my analysis is geo-political.

The development of the American transcendental state through space exploration must also be viewed as an integral component of a far older geopolitical project—the production of an American identity defined in terms of the transcendence of limits, whether technological, economic, spiritual or territorial, enabling the moral aggrandizement of the past, present and future of a horizontal strata of sovereign territory and its peoples (McDougall, 1997; Noble, 2002; Nye, 1994; O’Brien, 1988; Ricard, 1999; Stephanson, 1995). Over the last decade or so, a growing number of scholars, including geographers, have turned their attention to how messianic-exceptionalist visions of America as the ‘Promised Land’ of ‘Chosen People’ have inflected various imperialistic projects including: the pursuit of democracy through military intervention in the ‘global south’ (Anthony, 2008); the technocratic ‘greening’ of Western global capitalism (Singer, 2010); the building of a ‘culture of war’ in foreign policy (Marsella, 2011), the circumvention of international institutions (Agnew, 2006); and most prominently perhaps, George W. Bush’s ‘war on terror’ where invasions of Afghanistan and Iraq became justified as a ‘cosmic struggle between good and evil’ (Agnew, 2006: 183; see also Barkun, 2010; Dijink, 2006; Strum, 2010; Wallace, 2006). All of this work indicates two points: first, the enduring Apocalyptic influence of dispensational pre-millennialism on both interventionist and isolationist currents within American (geo)politics (Strum and Dittmer, 2010: 18); and secondly, the rise of a religious cosmology that positions America at the moral, geographical, and spiritual, centre of the universe (Strum, 2010: 150).

My analysis of American spaceflight adds to this body of work on religion and geopolitics by drawing attention to five less discussed conduits of this pious vision of American geopower: (i) the secular—museums, family theme parks, systems management; (ii) the sublime—astronomical artwork, Moon landings and distant Nebula; (iii); the profane—Nazi slave labor camps, technocratic patriarchy, and dead astronauts; the technological (iv)—rocket production lines, O-rings, electrical wiring; and (v) the revolutionary—female astronauts, May 1968, and Richard Feynman. Analytically, these diverse registers suggest the utility of working with a broader, less explicitly spiritual, set of theoretical assumptions, to address the cosmological aspects of American geopolitics. This is why I mobilized the concept of the ‘American transcendental state’, rather than ‘deified nation’ (O’Brien, 1988: 41) within this study. This deliberately hallucinogenic sounding term captures some sense that the messianic-exceptionalistic projection of American geopower is a more diffusive, experimental, fantasmic, embodied, and ostensibly secular, affair, than conveyed within much discursive analysis of the religious undercurrents inflecting American geopolitics (for example Agnew, 2006; Dijink, 2006; Strum, 2010; Wallace, 2006).

I would like to suggest now that there is another benefit in bringing together these diverse practices under a broader analysis of the American transcendental state: their common geography becomes all the more obvious. That is, all these practices involve thinking, doing or resisting, celestial transcendence as an apparatus of American geopower; hence they can all be rightly considered ‘vertical geopolitics’ (Elden, 2013; Graham, 2004; Graham and Hewitt, 2013). This label has developed to identify a body of work addressing how the circulation of American geopower involves more than two-dimensional geographies of area. It currently includes analyses of; drone warfare (Gregory, 2011); aerial bombardment (Graham, 2004); police helicopters (Adey, 2010); satellite surveillance (Macdonald, 2007) and satellite drone navigation and targeting (Gregory, 2011). Elden (2013: 40) explains that ‘vertical geopolitics’ is mostly focussed upon how state political technologies allow diverse populations to be measured, calculated, controlled and killed, ‘from above’, and occasionally ‘from below’ (for example Elden, 2013; Graham and Hewitt, 2013). By contrast, the vertical orientation I have adopted here, while related, is different. Specifically, I have described how aspects of the projection of American identity, geopower, and territory, also involve a vertical spacelessness—a deterritorialization—a potential collapse into sublime, cosmic, insignificance; in short, rather than the ‘view from above’, the perspective I have traced has been a ‘view into the above’ (and back). In part, therefore, my study can be considered a response to Elden’s (2013) recent question: ‘How would our thinking of geo-power, geo-politics and geo-metrics work if we took the earth; the air and the subsoil; questions of land, terrain, territory; earth processes and understandings of the world as the central terms at stake, rather than a looser sense of the ‘global?’ (p49)

I propose we add to this list celestial entities, including the Moon (Chapter 3), the Martian surface (Chapter 6) and the Eagle Nebula (Chapter 7), as well as God (Agnew, 2006; Dittmer and Strum, 2010; Strum, 2013). Thus, perhaps we should be cautious of Elden’s (2013b) rather geocentric call ‘about how geopolitics might be thought as earth-politics rather than simply a synonym for global politics’ (p59). Instead, it might be more useful to bear in mind Deleuze and Guattari’s (1988: 101) argument that even absolute deterritorialization—something akin perhaps to the mathematical cosmic sublime of Kant (Nye, 1994: 7-8)—always involves reterritorialization(s). Recall how Charles Bonestell (Chapter 2), William Clancey (Chapter 6) and the National Air and Space Museum (Chapter 7), respectively, and persuasively, associated vistas of the Moon, Mars and the Eagle Nebula with the American West, and by extension locate America at the centre of God’s universe (Boime, 1991; Stephanson, 1995).

This analysis of American spaceflight also sheds light on seldom acknowledged connections between religious and vertical geopolitics and technocracy. The relation between critical analysis of geopolitics (O Tuathail, 1996) and technocratic management (Alvesson, 1987), remains remarkably undeveloped. Arguably this lacuna says more about the disciplinary separation between critical security studies and organization studies (Grey, 2009) than the various intellectual crossfertilizations between organization studies and human geography (Clegg and Kornberger, 2006; Dale and Burrell, 2008; Parker, 2013). Nevertheless, there are, as Grey (2009) maintains, clear resonances:

Indeed it could said that, in the same way that the development of security studies in particular, and organization studies to an extent, was shaped by geopolitics of wars both hot and cold, so too many current and future directions be in part a reflection of developments in contemporary geo-politics (p31).

Some organizational practices are of course, very much on the ‘front line’ of practical geopolitics; that is, they comprise the ‘the foreign policy bureaucracy’ (Ó Tuathail and Dalby, 1998: 4) through which geographical concepts are deployed to aid ‘conceptualization and decision making’ in ‘everyday foreign policy’ (O Tuathail, 1999: 110). Examples here include the work of the US Air Force, the CIA (Central Intelligence Agency) and the UK’s Foreign and Common Wealth Office. There are also a host of other organizations that no doubt influence how practical geopolitics is produced, from security analysts like the RAND Corporation to global defense contractors like McDonnell Douglas. However, analysis of the relationship between organizational and geopolitical practices remains embryonic. For example, Anderson’s (2011) study of urban counterinsurgency and Gregory’s (2011) of drone warfare, do no more than merely infer that the rise of the ‘networked organization’ is reworking the projection of American geo-power. Correspondingly, two organizational studies of the military only hint that, for example, masculine discipline (Godfrey et al., 2012) and team identities (Corona and Godart, 2010) shape and are themselves shaped by grand geopolitical narratives like the ‘war on terror’.

But the imbrication of geopolitical and organizational practice can also be more subtle and much less militaristic—concerning the anticipation and cultivation of geopower through shared national identities, that is ‘popular geopolitics’ (O Tuathail, 1999: 110). Here, the connection to organizational practices is no less significant, yet invisible in the literature. NASA offers a good example: from its inception, the space agency developed increasingly refined technocratic techniques that aligned people and machines to naturalize the pursuit of a popular geopolitics wedded to American geopower. Viewed in this way, imperialistic geopower and technocratic-managerialism are interwoven forces; hence the present study suggests the richness of more sustained critical analysis of organization and geopolitics.

### 1NC -- Space War

#### No space escalation---empirics, de facto norms, and unpredictable consequences

Pavur 19 [James, DPhil Researcher Cybersecurity Centre for Doctoral Training Oxford University, Ivan Martinovic, Professor of Computer Science Department of Computer Science “The Cyber-ASAT: On the Impact of Cyber Weapons in Outer Space” https://ccdcoe.org/uploads/2019/06/Art\_12\_The-Cyber-ASAT.pdf]

3. STABILITY IN SPACE

Given the uncomfortable combination of high dependency and low survivability, one might expect to observe frequent attacks against critical military assets in orbit. However, despite decades of recurring prophesies of impending space war, no such conflict has broken out [14]–[18]. It is true that a handful of space security crises have occurred; most notably, the 2007 Chinese anti-satellite weapon (ASAT) test and the 2008 US ASAT demonstration in response [19]. Moreover, a recent Centre for Strategic and International Studies report suggests increasing interest in attacking US space assets, particularly among the Chinese, Russian, North Korean and Iranian militaries [20]. Overall, however, the space domain has remained puzzlingly peaceful. In this section, we outline three major contributors to this enduring stability: limited accessibility, attributable norms, and environmental interdependence.

A. Limited Accessibility

Space is difficult. Over 60 years have passed since the first Sputnik launch and only nine countries (ten including the EU) have orbital launch capabilities. Moreover, a launch programme alone does not guarantee the resources and precision required to operate a meaningful ASAT capability. Given this, one possible reason why space wars have not broken out is simply because only the US has ever had the ability to fight one [21, p. 402], [22, pp. 419–420].

Although launch technology may become cheaper and easier, it is unclear to what extent these advances will be distributed among presently non-spacefaring nations. Limited access to orbit necessarily reduces the scenarios which could plausibly escalate to ASAT usage. Only major conflicts between the handful of states with ‘space club’ membership could be considered possible flashpoints. Even then, the fragility of an attacker’s own space assets creates de-escalatory pressures due to the deterrent effect of retaliation. Since the earliest days of the space race, dominant powers have recognized this dynamic and demonstrated an inclination towards de-escalatory space strategies [23].

B. Attributable Norms

There also exists a long-standing normative framework favouring the peaceful use of space. The effectiveness of this regime, centred around the Outer Space Treaty (OST), is highly contentious and many have pointed out its serious legal and political shortcomings [24]–[26]. Nevertheless, this status quo framework has somehow supported over six decades of relative peace in orbit.

Over these six decades, norms have become deeply ingrained into the way states describe and perceive space weaponization. This de facto codification was dramatically demonstrated in 2005 when the US found itself on the short end of a 160-1 UN vote after opposing a non-binding resolution on space weaponization. Although states have occasionally pushed the boundaries of these norms, this has typically occurred through incremental legal re-interpretation rather than outright opposition [27]. Even the most notable incidents, such as the 2007-2008 US and Chinese ASAT demonstrations, were couched in rhetoric from both the norm violators and defenders, depicting space as a peaceful global commons [27, p. 56]. Altogether, this suggests that states perceive real costs to breaking this normative tradition and may even moderate their behaviours accordingly.

One further factor supporting this norms regime is the high degree of attributability surrounding ASAT weapons. For kinetic ASAT technology, plausible deniability and stealth are essentially impossible. The literally explosive act of launching a rocket cannot evade detection and, if used offensively, retaliation. This imposes high diplomatic costs on ASAT usage and testing, particularly during peacetime.

C. Environmental Interdependence

A third stabilizing force relates to the orbital debris consequences of ASATs. China’s 2007 ASAT demonstration was the largest debris-generating event in history, as the targeted satellite dissipated into thousands of dangerous debris particles [28, p. 4]. Since debris particles are indiscriminate and unpredictable, they often threaten the attacker’s own space assets [22, p. 420]. This is compounded by Kessler syndrome, a phenomenon whereby orbital debris ‘breeds’ as large pieces of debris collide and disintegrate. As space debris remains in orbit for hundreds of years, the cascade effect of an ASAT attack can constrain the attacker’s long-term use of space [29, pp. 295– 296]. Any state with kinetic ASAT capabilities will likely also operate satellites of its own, and they are necessarily exposed to this collateral damage threat. Space debris thus acts as a strong strategic deterrent to ASAT usage.

#### Multiple complex factors make space war escalation obsolete

Handberg 17 - chair of the Political Science Department at University of Central Florida – specializes in space policy, defense policy, the U.S. Supreme Court and judicial politics (Roger Handberg; “Comparative Strategy”; “Is space war imminent? Exploring the possibility”; Routledge: Taylor and Francis Group; pgs. 419-421; Accessed 7/3/18)//TS

The assumption made is that space war will be successfully waged in both the heavens and on the Earth itself. This assumption, however, is grounded on several hypotheticals occurring. First, that total devastating strategic surprise can be achieved—the side attacked becomes so damaged and devastated that further resistance is impossible to sustain regardless of national will, since nuclear weapons overhang the entire enterprise. The analogy usually invoked for American audiences is a “Pearl Harbor” type attack. This scenario is premised on equivalent American incompetence and lack of readiness as exhibited in December 1941. One must note that Pearl Harbor ended as a strategic failure for Japan—it led to defeat because the attack mobilized U.S. power without hesitation, given the intense political divisions over whether to enter the worldwide conflicts already raging. The attack was a military failure because Navy carriers were not destroyed along with battleship row along with critical fuel facilities. Similar analogies invoke September 11, 2001 as the prototype for such attacks more recently, but the same caveats apply. Total surprise assumes that all relevant opponent systems and civilian assets are disabled and left vulnerable to follow on attacks. In fact, collapse of U.S. defenses leaves U.S. cities as hostages to the rulers of the heavens, or vice versa if the U.S. moves first. Space war is extremely destabilizing, as will be discussed, since survivability of one’s strategic assets becomes problematic.

Second, surprise requires that sufficient offensive space assets be placed in orbit without triggering a response by other states—the scale of such technology deployment is in itself possibly self-defeating given high costs and a likely lack of launch capacity. In addition, much launch capacity is now international rather than national, so maintaining secrecy becomes even more difficult. Space as an operational environment suffers from excessive transparency, meaning any launches can be monitored and tracked by others with strong evidence as to what is being deployed. One must remember that the original satellite launches in the 1950s were accurately tracked by a British grade-school class as a science project. In addition, at least since the early 1960s, remote sensing has increased exponentially the global capability to detect buildup of military assets of differing types, whether in space or on the ground. Commercial remote-sensing capabilities further enhance the capacity to detect militarily relevant actions. For example, commercial imagery is accessed by private parties to monitor the North Korean missile and nuclear weapons programs, in effect expanding the capacity of the world to look in on various states’ interior regions, scanning for relevant information, including weapons buildup and launch capabilities. Even construction of physical facilities for production of space assets or for other weaponry can be monitored, making surprise more difficult but not impossible, as demonstrated in earlier monitoring of North Korea and, in 1998, the nuclear tests by both Pakistan and India. That means if the ASAT weapons come from ground locations, there is a high probability that they can be detected but no guarantee exists that detection will in fact occur. The uncertainty will impact calculations of attack success.

Third, the most obvious initial attack of space-based assets will most likely come from cyber attacks, given that such actions do not necessarily require the scale of resources necessary for other modalities such as kinetic weapons, or even lasers or other energy-type weapons. One will have to position the weapons plus the infrastructure to permit rapid recycling of the weapons for the next attack. Firing off interceptors will likely be a one-off, meaning extremely precise targeting will be required if the attack is to be successful. Note that none of these systems require that individuals be placed in Earth orbit, despite the imagery describing such operations in fictional universes.

Deployment requires a large lift capacity for initial deployment plus replenishment of destroyed or inoperative space assets, since a space conflict assumes that assets will be lost either kinetically or be compromised by cyber or energy beams. In any case, the combatants must be able to recover their capabilities lost during the conflict; failure to do would mean defeat or at least stalemate, negating the reason for the attack. That raises a major question when one considers the problem or expectation that space war can be successfully conducted or defended. Operationally Responsive Space (ORS) remains a critical weak point for all potential space-war participants. Loss of space assets occurs routinely during operations, but actual combat losses can be exponential depending on the weaponry used, and replacing those losses becomes the race to the next level after the initial exchange or combat. Unfortunately, ORS remains a major weakness of the United States and likely other states; deploying replacement satellites remains a multiyear process, while launch capabilities are scheduled long in advance. The rise of multiple private launch competitors may partially alleviate some of the delay but that remains problematic given that the military payloads may be competing with commercial vendors also trying to replace losses. The tradeoff is that. in principle, private-launch vendors may be able to do so more cheaply, but their capacity may be saturated by demand from the civil and commercial sectors, leaving few “uncommitted” launch options for military purposes. Normally this is not an issue, but the available launch options may be third party rather than national-flag carriers, which raises severe security concerns.

Fourth, several other assumptions become essential to make the strategy work, including that such an attack does not render Earth orbit so debris-saturated that further military space operations become impossible to sustain. Also, damage to civilian space assets remains, such that their continuation is possible if undamaged replacements can be quickly reintroduced to restart economically critical operations. Globalization has been fostered through satellite technologies. Their disruption can be devastating for all parties, regardless of who is the winner or the loser. What may occur is the graveyard of the modern economic system. No potential space participants would be immune to the damage, regardless of whether or not they were participants in the actual conflict.

#### Zero risk of escalation from ASATs

**Pavur and Martinovic 19** [James Pavur and Ivan Martinovic, May 2019, "The Cyber-ASAT: On the Impact of Cyber Weapons in Outer Space," ResearchGate, 11th International Conference on Cyber Conflict: Silent Battle [https://www.researchgate.net/publication/334422193\_The\_Cyber-ASAT\_On\_the\_Impact\_of\_Cyber\_Weapons\_in\_Outer\_Space accessed 12/10/21](https://www.researchgate.net/publication/334422193_The_Cyber-ASAT_On_the_Impact_of_Cyber_Weapons_in_Outer_Space%20accessed%2012/10/21)]Adam

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