## 1

### 1NC – Royal Science – Grove

#### International Relations is the royal science of empire – the aff engineers “sustainable warfare” through a mutating geopolitics of violence.

Grove ‘19

[Jarius, PoliSci at the University of Hawai’i. 2019. “Savage Ecology: War and Geopolitics in the Anthropocene.”] pat – ask me for the PDF!

Because I wanted this book to inspire curiosity beyond the boundaries of international relations (ir), I considered ignoring the field altogether, removing all mentions of ir or ir theory. However, upon closer reflection, I have decided to keep these references as I think they are relevant for those outside the discipline and for those who, like myself, often feel alienated within its disciplinary boundaries. In the former case, it is important to know that, unlike some more humble fields, ir has always held itself to be a kind of royal science. Scholarship in ir, particularly in the United States, is half research, and half biding time until you have the prince’s ear. The hallowed names in the mainstream of the field are still known because they somehow changed the behavior of their intended clients—those being states, militaries, and international organizations. Therefore, some attention to ir is necessary because it has an all-too-casual relationship with institutional power that directly impacts the lives of real people, and ir is all too often lethal theory. As an American discipline, the political economy of the field is impossible without Department of Defense money, and its semiotic economy would be equally dwarfed without contributory figures like Woodrow Wilson, Henry Kissinger, and Samuel Huntington. The ubiquity of Huntington’s “clash of civilizations” thesis and Kissinger’s particular brand of realpolitik are undeniable throughout the field, as well as the world. Each, in their own way, has saturated the watchwords and nomenclature of geopolitics from an American perspective so thoroughly that both political parties in the United States fight over who gets to claim the heritage of each. Although many other fields such as anthropology and even comparative literature have found themselves in the gravitational pull of geopolitics, international relations is meant to be scholarship as statecraft by other means. That is, ir was meant to improve the global order and ensure the place of its guarantor, the United States of America. Having spent the better part of a decade listening to national security analysts and diplomats from the United States, South Korea, Japan, Europe, China, Brazil, and Russia, as well as military strategists around the planet, I found their vocabulary and worldview strikingly homogeneous.

If this seems too general a claim, one should take a peek at John Mearsheimer’s essay “Benign Hegemony,” which defends the Americanness of the ir field. What is most telling in this essay is not a defense of the U.S. as a benign hegemonic power, which Mearsheimer has done at length elsewhere. Rather, it is his vigorous defense that as a field, ir theory has done well by the world in setting the intellectual agenda for global challenges, and for creating useful theoretical approaches to addressing those problems. For Mearsheimer, the proof that American scholarly hegemony has been benign is that there is nothing important that has been left out. A quick scan of the last ten or twenty International Studies Association conferences would suggest otherwise.

That issues like rape as a weapon of war, postcolonial violence, global racism, and climate change are not squarely in the main of ir demonstrates just how benign American scholarly hegemony is not. As one prominent anthropologist said to me at dinner after touring the isa conference in 2014, “it was surreal, like a tour through the Cold War. People were giving papers and arguing as if nothing had ever changed.” These same provincial scholars aspire and succeed at filling the advisory roles of each successive American presidency. One cannot help but see a connection between the history of the ir field, and the catastrophes of U.S. foreign policy during the twentieth and twenty-first centuries. One could repeat the words of the anthropologist I mentioned to describe the 2016 presidential campaign debates over the future of U.S. foreign policy: it is as if “nothing had ever changed.” And yet these old white men still strut around the halls of America’s “best” institutions as if they saved us from the Cold War, even as the planet crumbles under the weight of their failed imperial dreams.

If international relations was meant to be the science of making the world something other than what it would be if we were all left to our own worst devices, then it has failed monumentally. The United States is once again in fierce nuclear competition with Russia. We are no closer to any significant action on climate change. We have not met any of the Millennium Development Goals determined by the United Nations on eradicating poverty. War and security are the most significant financial, creative, social, cultural, technological, and political investments of almost every nation-state on Earth. The general intellect is a martial intellect.

Despite all this failure, pessimism does not exist in international relations, at least not on paper. The seething doom of our current predicament thrives at the conference bar and in hushed office conversations but not in our research. In public, the darkness disavowed possesses and inflames the petty cynicisms and hatreds that are often turned outward at tired and predictable scapegoats.

After the fury of three decades of critique, most ir scholars still camp out either on the hill of liberal internationalism or in the dark woods of political realism. Neither offers much that is new by way of answers or even explanations, and each dominant school has failed to account for our current apocalyptic condition. One is left wondering what it is exactly that they think they do. Despite the seeming opposition between the two, one idealistic about the future of international order (liberals) and the other self-satisfied with the tragedy of cycles of war and dominance (realists), both positions are optimists of the positivist variety.

For both warring parties, ir optimism is expressed through a romantic empiricism. For all those who toil away looking for the next theory of international politics, order is out there somewhere, and dutifully recording reality will find it—or at least bring us closer to its discovery. For liberal internationalism, this will bring the long-heralded maturity of Immanuel Kant’s perpetual peace. For second-order sociopaths known as offensive realists, crumbs of “useful strategic insight” and the endless details that amplify their epistemophilia for force projection and violence capability represent a potential “advantage,” that is, the possibility to move one step forward on the global political board game of snakes and ladders. Still, the cynicism of ir always creeps back in because the world never quite lives up to the empirical findings it is commanded to obey. Disappointment here is not without reason, but we cynically continue to make the same policy recommendations, catastrophe after catastrophe.

I have an idea about where ir’s recent malaise comes from. I think it is a moment, just before the awareness of the Anthropocene, after the Cold War and before September 11, when the end of everything was only a hypothetical problem for those of a certain coddled and privileged modern form of life. The catastrophe of the human predicament was that there was no catastrophe, no reason, no generation-defining challenge or war. Now the fate of this form of life is actually imperiled, and it is too much to bear. The weird denial of sexism, racism, climate change, the sixth extinction, and loose nukes, all by a field of scholars tasked with studying geopolitics, is more than irrationalism or ignorance. This animosity toward reality is a deep and corrosive nihilism, a denial of the world. Thus ir as a strategic field is demonstrative of a civilization with nothing left to do, nothing left to destroy. All that is left is to make meaning out of being incapable of undoing the world that Euro-American geopolitics created. Emo geopolitics is not pretty, but it is real. The letdown, the failure, the apocalypse-that-was-not finally arrived, and we are too late.

Still, the United States of America continues to follow the advice of “the best and the brightest,” testing the imperial waters, not quite ready to commit out loud to empire but completely unwilling to abandon it. Stuck in between, contemporary geopolitics—as curated by the United States—is in a permanent beta phase. Neuro-torture, algorithmic warfare, drone strikes, and cybernetic nation-building are not means or ends but rather are tests. Can a polis be engineered? Can the human operating system be reformatted? Can violence be modulated until legally invisible while all the more lethal? Each incursion, each new actor or actant, and new terrains from brains to transatlantic cables—all find themselves part of a grand experiment to see if a benign or at least sustainable empire is possible. There is no seeming regard for the fact that each experiment directly competes with Thomas Jefferson’s democratic experiment. One wonders if freedom can even exist anywhere other than temporarily on the fringe of some neglected order. Is this some metaphysical condition of freedom, or is the world so supersaturated with martial orders that the ragged edges between imperial orders are all that we have left? It feels like freedom’s remains persist only in the ruins of everything else. No space is left that can be truly indifferent to the law, security, or economy. Such is the new life of a human in debt. The social contract has been refinanced as what is owed and nothing more: politics without equity. Inequity without equality.

What about the impending collapse of the post–World War II order, the self-destruction of the United States, the rise of China and a new world order? If humanity lasts long enough for China to put its stamp on the human apocalypse, I will write a new introduction. Until then, we live in the death rattle of Pax Americana. While I think the totality of this claim is true, I do not want to rule out that many of us throughout the world still make lives otherwise. Many of us even thrive in spite of it all. And yet, no form of life can be made that escapes the fact that everything can come to a sudden and arbitrary end thanks to the whim of an American drone operator, nuclear catastrophe, or macroeconomic manipulation like sanctions. There are other ways to die and other organized forms of killing outside the control of the United States; however, no other single apparatus can make everyone or anyone die irrespective of citizenship or geographic location. For me, this is the most inescapable philosophical provocation of our moment in time.

The haphazard and seemingly limitless nature of U.S. violence means that even the core principles of the great political realist concepts like order and national interest are being displaced by subterranean violence entrepreneurs that populate transversal battlefields, security corridors, and border zones. Mercenaries, drug lords, chief executive officers, presidents, and sports commissioners are more alike than ever. Doomsayers like Paul Virilio, Lewis Mumford, and Martin Heidegger foretold a kind of terminal and self-annihilating velocity for geopolitics’ technological saturation, but even their lack of imagination appears optimistic. American geopolitics does not know totality or finality; it bleeds, mutates, and reforms. Furthermore, the peril of biopolitics seems now almost romantic. To make life live? Perchance to dream. The care and concern for life’s productivity is increasingly subsumed by plasticity—forming and reforming without regard to the telos of productivity, division, or normative order.

There are, of course, still orders in our geoplastic age, but they are almost unrecognizable as such. When so many citizens and states are directly invested in sabotaging publicly stated strategic ends, then concepts like national interest seem equally quaint. We are witnessing creative and horrifying experiments in the affirmative production of dying, which also deprive those targeted and in some cases whole populations from the relief of death. To follow Rucker, I want to try to see the world for what it is. We can only say that tragedy is no longer a genre of geopolitics. Tragedy redeems. The occluded character of contemporary geopolitics shoehorned into experience produces the feeling that there is no relief, no reason, no victory, no defeats, and no exit within the confines of national security’s constricted world. This is not tragedy: it is horror. We live in an age of horror that, like the victims of gore movies who never quite die so that they can be tortured more, furthers our practice of collective violence and goes on for decades as a kind of sustainable warfare.

### 1NC – L – Topic – Havercroft and Duvall

#### The 1AC is embedded within an critical astropolitics of empire – the desire to command, control, and cooperate over the unique processes of space represent an attempt to make the cosmos into a geopolitical chess game

Havercroft and Duvall 9 (Jonathan Havercroft and Raymond Duvall; 2009; *“Critical astropolitics The geopolitics of space control and the transformation of state sovereignty”*; accessed 12/13/21; <https://www.law.upenn.edu/live/files/7892-havercroft-and-duvallcritical-astropoliticspdf>; Jonathan Havercroft is an Associate Professor in the Department of Politics and International Relations at the University of Southampton. He teaches in the areas of political theory and international relations. He is the editor of the journal Global Constitutionalism; Raymond Duvall is a Professor of Political Science at the University of Minnesota; pages 44-50) HB

Astropolitics: realist and liberal strands Realism and astropolitik Everett Dolman3 draws on the writings of Mackinder and Mahan as inspiration for his development of a theory, which he titles Astropolitik. By the term, astropolitik, Dolman means “the application of the prominent and refined realist vision of state competition into outer space policy, particularly the development and evolution of a legal and political regime for humanity’s entry into the cosmos” (Dolman 2002a: 1). While Mahan focused on the structure of the ocean to develop his theories, and Mackinder focused on the topography of land, Dolman turns his attention toward the cartography of outer space. Whereas, at first glance, space may appear to be a “featureless void,” Dolman argues that it “is in fact a rich vista of gravitational mountains and valleys, oceans and rivers of resources and energy alternately dispersed and concentrated, broadly strewn danger zones of deadly radiation, and precisely placed peculiarities of astrodynamics” (Dolman 2002a: 61). In a manner similar to Mahan’s focus on natural sea lanes and “choke points” and Mackinder’s emphasis of geographic regions, Dolman emphasizes orbits, regions of space, and launch points as geopolitically vital assets over which states can be expected competitively and strategically to struggle for control. Orbital paths are important because stable orbits require virtually no fuel expenditure for satellites, whereas unstable orbits make it impossible for satellites to remain in space for a long time. Furthermore, different types of orbits pass over different parts of the earth at different frequencies. As such, the mission of a spacecraft determines in large part which orbit is most useful for it. There are essentially four types of orbits: low-altitude (between 150 km and 800 km above the Earth’s surface); medium-altitude (ranging from 800 km–35,000 km); high-altitude (above 35,000 km); and highly elliptical (with a perigee of 250 km and an apogee of 700,000 km) (Dolman 2002a: 65–7). In addition to pointing to the division of space into orbital planes, Dolman also identifies four key regions of space: 1 Terra, which includes the Earth and its atmosphere up until “just below the lowest altitude capable of supporting unpowered orbit” (Dolman 2002: 69); 2 Earth Space, which covers the region from the lowest possible orbit through to geo-stationary orbit; 3 Lunar Space, which extends from geo-stationary orbit to the Moon’s orbit; and 4 Solar Space, which “consists of everything in the solar system . . . beyond the orbit of the moon” (Dolman 2002a: 70). For Dolman, Earth Space is the astropolitical equivalent of Mackinder’s Outer Crescent, because controlling it will permit a state to limit strategic opportunities of potential rivals and at the same time allow the projection of force for indirect control (i.e. without occupation) of extensive territory of vital strategic importance, in this case (unlike Mackinder’s) potentially the entire Earth. “Control of Earth Space not only guarantees long-term control of the outer reaches of space, it provides a near-term advantage on the terrestrial battlefield” (Dolman 1999: 93). On the basis of these principles, Dolman develops an “Astropolitik policy for the United States” (Dolman 1999: 156), which calls on the U.S. government to control Earth Space. In the current historical–political juncture, no state controls this region. However, rather than leave it as a neutral zone or global commons, Dolman calls for the U.S. to seize control of this geo-strategically vital asset. According to Dolman’s reasoning, the neutrality of Earth Space is as much a threat to U.S. security as the neutrality of Melos was to Athenian hegemony. To leave space a neutral sanctuary could be interpreted as a sign of weakness that potential rivals might exploit. As such, it is better for the U.S. to occupy Earth Space now. Dolman’s astropolitik policy has three steps. The first involves the U.S. withdrawing from the current space regime on the grounds that its prohibitions on commercial and military exploitation of outer space prevent the full exploitation of space resources. In place of the global commons approach that informs that regime, Dolman calls for the establishment of “a principle of free-market sovereignty in space” (Dolman 2002a: 157), whereby states could establish territorial claims over areas they wish to exploit for commercial purposes. This space rush should be coupled with “propaganda touting the prospects of a new golden age of space exploration” (Dolman 2002a: 157). Step two calls for the U.S. to seize control of low-Earth orbit, where “space-based laser or kinetic energy weapons could prevent any other state from deploying assets there, and could most effectively engage and destroy terrestrial enemy ASAT facilities” (Dolman 2002a: 157). Other states would be permitted “to enter space freely for the purpose of engaging in commerce” (Dolman 2002a: 157). The final step would be the establishment of “a national space coordination agency ... to define, separate and coordinate the efforts of commercial, civilian and military space projects” (Dolman 2002a: 157). Within Dolman’s theory of astropolitik is a will-to-space-based-hegemony fuelled by a series of assumptions, of which we would point to three as especially important. First, it rests on a strong preference for competition over collaboration in both the economic and military spheres. Dolman, like a good realist, is suspicious of the possibilities for sustained political and economic cooperation, and assumes instead that competition for power is the law of international political–economic life. He believes, though, that through a fully implemented astropolitical policy “states will employ competition productively, harnessing natural incentives for self-interested gain to a mutually beneficial future, a competition based on the fair and legal commercial exploitation of space” (Dolman 2002a: 4). Thus, underpinning his preference for competition is both a liberal assumption that competitive markets are efficient at producing mutual gain through innovative technologies, and the realist assumption that inter-state competition for power is inescapable in world politics. As we will note more fully below, this conjunction of liberal and realist assumptions is a hallmark of the logic of empire as distinct from the logic of a system of sovereign states. The second and most explicit of Dolman’s key assumptions is the belief that the U.S. should pursue control of orbital space because its hegemony would be largely benign. The presumed benevolence of the U.S. rests, for Dolman, on its responsiveness to its people. If any one state should dominate space it ought to be one with a constitutive political principle that government should be responsible and responsive to its people, tolerant and accepting of their views, and willing to extend legal and political equality to all. In other words, the United States should seize control of outer space and become the shepherd (or perhaps watchdog) for all who would venture there, for if any one state must do so, it is the most likely to establish a benign hegemony. (Dolman 2002a: 157) However, even if the U.S. government is popularly responsive in its foreign policy – a debatable proposition – the implication of Dolman’s astropolitik is that the U.S. would exercise benign control over orbital space, and, from that position, potentially all territory on Earth and hence all people, by being responsible to its 300 million citizens. As such, this benign hegemony would in effect be an apartheid regime where 95 percent of the world would be excluded from participating in the decision-making of the hegemonic power that controls conditions of their existence. This, too, is a hallmark of empire, not of a competitive system of sovereign states. Third, Dolman’s astropolitik treats space as a resource to be mastered and exploited by humans, a Terra Nulius, or empty territory, to be colonized and reinterpreted for the interests of the colonizer. This way of looking at space is similar to the totalizing gaze of earlier geopolitical theorists who viewed the whole world as an object to be dominated and controlled by European powers, who understood themselves to be beneficently, or, at worst, benignly, civilizing in their control of territories and populations (Ó Tuathail 1996: 24–35). This assumption, like the first two, thus also implicates a hallmark of the logic of empire, namely what Ó Tuathail (1996) calls the ‘geopolitical gaze’ (about which we have more to say below), which works comfortably in tandem with a self-understanding of benign hegemony. When these three assumptions are examined in conjunction, Dolman’s astropolitik reveals itself to be a blueprint for a U.S. empire that uses the capacities of space-based weapons to exercise hegemony over the Earth and to grant access to the economic resources of space only to U.S. (capitalist) interests and their allies. This version of astropolitics, which is precisely the strategic vision underlying the policy pronouncements of the National Security Space Management and Organization Commission (Commission 2001) – and subsequently President George W. Bush – with which we began this chapter, is a kind of spatial, or geopolitical, power within the context of U.S. imperial relations of planetary scope. Its ostensive realist foundations are muted, except as a rather extreme form of offensive realism, because the vision is not one of great power competition and strategic balancing, but rather one of imperial control through hegemony. As such, it brings into question the constitution of sovereignty, since empire and sovereignty are fundamentally opposed constitutive principles of the structure of the international system – the subjects of empire are not sovereign. Thus, if astropolitics is to be in the form of Dolman’s astropolitik (and current U.S. policy aspirations), the future of sovereignty is in question, despite his efforts to position the theory as an expression of the realist assumption of great power competition. In later sections of this chapter, we attempt to show what this bringing sovereignty into question is likely to mean, conceptually and in practice. Before turning to that principal concern, however, we consider an alternative geopolitical theory of astropolitics. Liberal-republican astropolitics Over the past twenty-five years, in a series of articles and recently a major book, Daniel Deudney has attempted to rework the tenets of geopolitics and apply them to the contemporary challenges raised by new weapons technologies – particularly nuclear and space weapons (Deudney 1983, 1985, 1995, 2000, 2002, 2007).4 While Deudney finds geopolitical theory of the late nineteenth century and early twentieth century theoretically unsophisticated and reductionist, he believes that geopolitical attention to material conditions, spatiality, change, and political processes could form the basis of a theoretically sophisticated contextual–materialist security theory of world politics. Deudney starts from a premise about space weaponization similar to the core of Dolman’s astropolitik, namely that if any state were able to achieve military control of space, it would hold potential mastery over the entire Earth. One preliminary conclusion, however, seems sound: effective control of space by one state would lead to planet-wide hegemony. Because space is at once so proximate and the planet’s high ground, one country able to control space and prevent the passage of other countries’ vehicles through it could effectively rule the planet. Even more than a monopoly of air or sea power, a monopoly of effective space power would be irresistible. (Deudney 1983: 17) Rather than developing the implications of this as a strategic opportunity for any one state (e.g. the U.S.), however, Deudney sees it as a collective problem to be kept in check through collaboration; his project is to avoid space-based hegemony through cooperation among states. In a series of articles on global security written in the 1980s – while Cold War tensions between the U.S. and the U.S.S.R. continued to frame much theoretical discussion in international relations – Deudney saw the space age as a double-edged sword in superpower relations. On the one side, space weaponization posed a risk that the superpowers would extend their conflict extra-terrestrially and devise new, deadlier technologies that would enhance the risk of exterminating all of humanity; on the other, according to Deudney, the space age had found productive opportunities for the superpowers to deal with their rivalries in stabilizing collaboration. He notes that the Sputnik mission, while in the popular understanding only an escalation of the Cold War, initially was the result of an internationally organized research program – the International Geophysical Year (Deudney 1985; though see Dolman 2002a: 106–107 for an alternate interpretation of these events as Cold War competition). Another example was President Eisenhower’s proposed “Atoms for Peace” project, which involved the great powers sharing nuclear technology with developing nations for energy purposes. Most famous was the collaboration between the Soviet Union and the U.S. during the 1970s on the rendezvous between an Apollo capsule and the Soyuz space station. Similar multinational collaborations continue to this day, with the most notable example being the International Space Station. In addition to promoting collaboration, according to Deudney, the space age has also enhanced the ability of space powers to monitor each other – through spy satellites – thereby increasing the likelihood that they abide by arms control treaties. Deudney believes that these types of collaboration and increased surveillance could be strengthened and deepened so that great powers could be persuaded over time to “forge missiles into spaceships” (Deudney 1985: 271). In the 1980s this led Deudney to develop a set of specific proposals for a peaceful space policy, including collaboration between space powers on manned missions to the Moon, asteroids, and Mars. The development of an International Satellite Monitoring Agency would make “space-based surveillance technology accessible to an international community” for monitoring ceasefires, crises, compliance with international arms control treaties, and the Earth’s environment (Deudney 1985: 291). These proposals are aimed at promoting collaboration on projects of great scientific and military significance for the individual states. Deudney’s expectation is that such cooperation would mitigate security dilemmas and promote greater ties between states that would co-bind their security without sacrificing their sovereignty. While Deudney has not been explicit about how his astropolitics of collaboration would alter world order, in his more theoretical writings he has elaborated the logic of a liberal-republican international system. In a 2002 article on geopolitics and international theory, he developed what he called a‘historical security materialist’ theory of geopolitics: “[I]n which changing forces of destruction (constituted by geography and technology) condition the viability of different modes of protection (understood as clusters of security practices) and their attendant ‘superstructures’ of political authority structures (anarchical, hierarchical, and federal-republican)” (Deudney 2002: 80). In that work, he identified four different eras in which distinct modes of destruction were predominant: Pre-modern; Early Modern; Global Industrial; and Planetary-Nuclear, as well as two modes of protection: real-statism, which is based on an internal monopoly of violence and external anarchy; and federal-republicanism, which is based on an internal division of powers and an external symmetrical binding of actors through institutions that reduces their autonomy in relation to one another. According to Deudney, in the Planetary-Nuclear age the federal-republican mode of protection is more viable because states “are able to more fully and systematically restrain violence” than under the power balancing practices of real-statist modes of protection (Deudney 2002: 97; see also Deudney 2007: 244–277 for an elaboration of this argument). Although Deudney has not extended his “historical security materialist” approach into explicitly theorizing space weapons, per se (dealt with only tangentially and implicitly in the last two chapters of his recent book), his proposals during the Cold War to foster institutional collaboration between space powers as a way of promoting peace can safely be understood as a form of the mutually binding practices that he associates with the federalrepublican mode of protection. In addition, one of the general conclusions that Deudney reaches about “historical security materialism” is that the more a security context is rich in the potential for violence, the better suited a federal-republican mode of protection is to avoid systemic breakdown. Therefore, it seems reasonable to conclude that within Deudney’s work is a nascent theory of how a federal-republican international system could limit conflict between space powers by binding them together in collaborative uses of space for exploratory and security uses. In this sense, Deudney can be read as the liberal-republican astropolitical counterpart to Everett Dolman.5 While Deudney’s astropolitical theorizations hold out the promise of a terrestrial pacification through space exploration it is interesting to note a significant aporia in his theory – empire as a possible mode of protection. While real-statist modes of protection have an internal hierarchical authority structure, they are based on assumptions of external-anarchy, which is to say a system of sovereign states. Conversely, the federal-republican model is based on a symmetrical binding of units, in a way that no single unit can come to dominate others and accordingly in which they preserve their sovereignty (Deudney 2000, 2002, 2007). In a third mode, to which Deudney gives only scant attention, the case of empire, the hegemony of a single unit is such that other units are bound to it in an asymmetrical pattern that locates sovereignty only in the hegemon, or imperial center. Successful empires, including the Roman, British, and American, permit local autonomy in areas that are not of the imperial power’s direct concern while demanding absolute obedience in areas that are of vital concern to it, particularly when it comes to issues of security.6 Deudney’s implicit astropolitical theory thus ignores structurally asymmetric relations – in effect he ignores power. It is as if in wanting to have the world avoid the possibility of a planetary hegemony at the heart of the premise with which he and Dolman began their respective analyses, he white-washes it by failing to acknowledge the profound asymmetries of aspirations and technological–financial–military capacities among states for control of orbital space. In the next two sections we respond to Deudney’s call for “historical security materialism” by focusing on the premise that he skirts but that Dolman emphasizes, that military control of space means (at least the possibility of) mastery of the Earth. Specifically we examine how a new mode of destruction – space weapons – is the ideal basis for the third mode of protection – empire – through its potential for substantial asymmetry. We argue that the power asymmetries of space weapons have very significant constitutive effects on sovereignty and international systemic anarchy, and underlie the constitution of a new, historically unprecedented, form of empire. Before turning to that central thesis, however, we will first sketch the general contours of a critical astropolitics, which builds on the foundational premise of Dolman and Deudney, but modifies their theories in light of the significant insights of critical theory, particularly with respect to constitutive power. We ask: what consequences of astropolitics can a critical approach illuminate that may be concealed by an astropolitics informed by either liberal-republican or realist assumptions? How can insights offered by the revival of geopolitics in the writings of Deudney and Dolman – particularly the call for a new security materialist mode of analysis – be used to supplement and refine critical international relations theory?

### 1NC – L – Debris - Stroikos

#### The aff’s managerial concerns over space debris is techno-nationalism – liberal governance over space as a “commons” is the exclusive domain of space-faring nations

Stroikos ‘16

[Dimitrios, University of York. 2016. “China, India in Space and the Orbit of International Society: Power, Status, and Order on the High Frontier.”] Pat

Moreover, it is necessary to briefly say something about how techno-nationalism as a primary institution interacts with some of the other institutions of international space society. First, in many ways, techno-nationalism is complimentary to sovereign statehood because sovereignty in space is largely embedded in cosmopolitan and solidarist conceptions. This is partly why highly visible space projects define spacefaring hierarchies. Second, and consequently, techno-nationalism is also closely linked to great power status and great power management in the sense that different space capabilities also confer different levels of status and responsibilities in the management of international order in space. Likewise, in relation to diplomacy, highly visible techno-nationalist space feats can also offer a seat at the table of diplomatic initiatives and negotiations. Seen in this light, ‘high-visibility’ projects, such as space programmes are part of ‘recognition games’, which states play in order to acquire the status of a great power (Suzuki, 2008). As Cunningham (2009: 74) notes, ‘to be a superpower, one must be a “spacefaring” nation’. The Space Market Arguably, the economic factor has been one of the most neglected issues in the English School literature. Discussing some of the shortcomings of Bull’s work, Miller (1990: 74) pointed out in 1990, ‘a basic criticism of Bull’s account of international society’ is ‘that it does not include a strong economic component’ dealing with rules regarding trade, navigation, and investment and the common interests that permeate the sphere of economic activities. Since then, some important work has been done to bring together the economic sector and the English School, especially in the context of globalisation (Buzan, 2004; Buzan, 2005; Hurrell, 2007: 194-215). However, the question of how to consider the economic sector within the English School remains rather underdeveloped. According to Buzan, one response is to treat capitalism as a master institution, but he prefers the use of the market as a more neutral term, which has the additional merit of encompassing other practices, such as trade (Buzan, 2004: 193-4, Buzan, 2014a: 136). Consequently, given the growing globalisation and commercialisation of space activities (OECD, 2014: 9-10), there are good reasons for considering the space market as an emerging primary institution of international space society. Significantly, in some ways, since the advent of the Space Age, the space market has followed a parallel trajectory to the market as a distinctive institution at the global level. In particular, although the market was a key primary institution of the Western global international society during much of the Cold War, it has emerged as a sort of a global institution in the post-Cold War era (Buzan, 2014a: 138). Likewise, the space market was initially confined to American-led space activities, beginning as a US government initiative with the Communications Satellite Act in 1962, which led to the creation of the International Telecommunications Satellite Consortium (Intelsat) in 1964 (Moltz, 2014: 94). However, during the early Cold War, commercial activities were largely limited to the field of satellite communications and even commercial transatlantic cooperation in space was determined to a large extent by political and strategic factors and technology transfer considerations (Krige, 2013b). Equally, the idea of the commercialisation of space remained contested not the least because of the opposition of the Soviet Union and communist China to the market in general. This began to change only in the 1980s, when a number of space players emerged, including Europe and Japan, that challenged the US leadership in the fields of satellite manufacturing, launching capability, and other commercial space services. It was also during this period that the Soviet Union and China became less reluctant to get involved with commercial space activities (Krige, 2013a: 16-7). But it was after the end of the Cold War that the globalisation and commercialisation of space activities gradually led to the emergence of a global space market, which points to its inclusion as a primary institution of the international space society. According to a recent report by the Space Foundation (2015: 2), the global space economy grew up by 9 percent in 2014, totalling $330 billion, with commercial space activities accounting for the 76 percent of the global space economy and direct-to-home television services accounting for more than three-quarters of the commercial space sector. Even in the launch field, which has been traditionally reserved to the state largely due to national security and cost considerations, US small private companies have emerged like Space Exploration Technologies Corporation, known as SpaceX, and XCOR Aerospace. As Newlove-Eriksson and Eriksson (2013) argue, the globalisation of space activities has been underpinned by the growing importance of private authority and transnational Public-Private Partnerships (PPPs) and the blurred distinction between the military and civilian uses of space. Therefore, it makes sense to think of the space market as an institution of international space society. Yet, a number of points are worth noting here as they help to highlight the possibilities and limits of this move. First, despite all the attention paid to the privatisation of space travel promoted by space entrepreneurs of the likes of Elon Musk (SpaceX), Jeff Bezos (Blue Origin), and Richard Branson (Virgin Galactic), the privatisation of space should not be overstated. Not only does the degree of privatisation vary across space services and products (Moltz, 2014: 102-12), but governments also remain central actors in the space industry as key sources of initial investment and as customers for several space products and services (Brennan and Vecchi, 2011: 18, OECD, 2014: 17). Second, while it is clear that the argument over whether to have the market or not ended with the collapse of the Soviet Union, the tension between economic nationalism and economic liberalism is far from over, as there are not many states fully open to the forces of the global economy and many states support a form of capitalism that is embedded in economic nationalism. This points to the contested nature of the market as a primary institution in the sense that for many states the challenge of how to relate to the global market and make it more effective remains (Buzan, 2014a: 138). As far as international space society is concerned, it is necessary to note that the contested nature of the space market as an institution is reflected in the continuing dialectics between techno-nationalism and techno-globalism. It is commonplace among scholars to argue that Japan and China are two key examples of states that privilege a techno-nationalist approach to technology and innovation, including space technology. But even the United States has not been immune to techno-nationalist impulses. As Weiss (2014) shows, the enduring lead in high technology that the United States still enjoys is largely explained by the creation of not a liberal, but a hybrid political economy, whereby the national security state is interwoven with the commercial sector. NASA, of course, has been a key institution of the national security state since the beginning of the Space Age. But this has also been manifested in its recent efforts to catalyse the development of a commercial space industry through inviting competitive innovation (Weiss, 2014: 119-20, 27-8). This leads to the third point to make about how to understand the relationship between techno-nationalism and the space market. Because of the enduring influence of the former, it is tempting to see techno-nationalism as containing the space market (at least for the time being). Clearly, at one level, the space market can be understood as complementary to techno-nationalism in the ever-globalising international space society. Yet, at another level, the space market as a solidarist institution is staged as opposed to techno-nationalism. This tension is compounded by the fact that, in many ways, techno-nationalism occupies the crucial place of national sovereignty and territoriality in the sector of space considering that sovereignty in international space society is largely understood in cosmopolitan terms. Fourth, in discussing the market as a primary institution, Beeson and Breslin (2014) suggest that it makes more sense to treat the ‘developmental state’ and ‘regional production structures’ as primary institutions in East Asia rather than focusing on the market. This is an important consideration that serves to highlight how the global political economy is underpinned by significant regional derivations. Following from this, although it is apparent that the space market is a key feature of the social structure of international space society, it is possible to say that there are significant regional derivations. Perhaps the best expression of this is the Chinese and Indian variants of postcolonial techno-nationalism that still shape how the two rising Asian space powers relate to the space market. In light of the above, for now, it seems that there is some sort of hierarchy between techno-nationalism and the space market with the former subsuming the latter, especially with regards to space programmes in a postcolonial context. Certainly, the integration of China and India into the global space economy has accelerated over the last decades, but, as we shall see, techno-nationalism is still prominent in the ways in which the two Asian space powers approach space technology. Moreover, the space market remains contested as an emerging institution due to the ambiguity embedded in space law regarding space activities carried on by private actors. This process is further complicated by the inherent dual-use nature of space technology and the blurring of the distinction between the private and public realms (Newlove-Eriksson and Eriksson 2013). Environmental Stewardship There is now a burgeoning literature that deals with the relationship between international society and global environmentalism and assesses the extent to which environmental stewardship can be seen as a nascent institution of international society. Recent efforts to find ways to mitigate space debris as well as to create a normative framework for the sustainability of space are illustrative of how environmental stewardship is gradually becoming an institution in space. For example, in 2007, COPUOS adopted the ‘Space Debris Mitigation Guidelines’, which were wrought by the international Inter-Agency Debris Coordination Committee (IADC), consisting of experts from thirteen space agencies (United Nations Office for Outer Space Affairs, 2010). Moreover, as discussed earlier, in 2010, COPUOS formed the Working Group on the Long-term Sustainability of Outer Space Activities. Notably, the European Union proposal for a Code of Conduct for Outer Space also includes provisions on space debris control and mitigation (Council of the European Union, 2008: 9; Dickow, 2009: 159). Thus, there are grounds for considering environmental stewardship as an emerging institution of international space society. Indeed, the growing number of governments, private firms, and non-state actors that emphasise the importance of the sustainable utilisation of space suggests that space sustainability has emerged as a key norm. However, what should be noted is that these developments reflect a more pragmatic approach to maintain the space environment sustainable for the effective use of space rather than an expression of cosmopolitan values. Consequently, in the subsequent chapters, rather than examining in detail the engagement of China and India with environmental stewardship as a nascent institution in space, the focus will be on the emerging norm of space sustainability as a key great power responsibility in managing international space order and the implications of this development for China and India as aspiring great powers. Concluding Remarks Although it is clear that there are a number of ways of understanding the international politics of space, it may be worth going beyond standard theoretical approaches to understand how order is maintained in space. Drawing on key English School concepts, this chapter suggests that it is possible to conceptualise space not merely as a system, but also as an international society with a distinct social structure. This exercise of concept development is important both analytically and hermeneutically, given the notion of an exclusive club of space-faring countries. The chapter developed this argument further by highlighting how the nature of outer space as a distinctive sectoral interstate society is manifested in the ways in which its primary institutions are differentiated from such institutions at the global level (space war, space law, cosmopolitan sovereignty, space diplomacy, balance of power, great power management, techno-nationalism, space market, and environmental stewardship) in a historical and comparative context. In doing so, the chapter helps to highlight the constitutive impact of these institutions on the norms that shape the behaviour of the space-faring states.

### 1NC – Die Sad – Grove

#### Voting negative adopts failed IR for a healthy dose of pessimism – at the end of the world, all we can do is hope to be buried alive together.

Grove ‘19

[Jarius, PoliSci at the University of Hawai’i. 2019. “Savage Ecology: War and Geopolitics in the Anthropocene.”] pat – ask me for the PDF!

Failed ir affirms the power of this kind of negative thinking as an alternative to the endless rehearsing of moralizing insights and strategic foresight. The negative is not “against” or reacting to something. Rather, it is the affirmation of a freedom beyond the limits of life and death. That is, it is making a life by continuing to think about the world, even if that thinking is not recuperative, and even if nothing we think can save us. In the face of it all, one celebrates useless thinking, useless scholarship, and useless forms of life at the very moment we are told to throw them all under the bus in the name of survival at all costs. This is a logic referred to lately as hope and it is as cruel as it is anxiety inducing. Hope is a form of extortion. We are told that it is our obligation to bear the weight of making things better while being chided that the failure of our efforts is the result of not believing in the possibility of real change. In such an environment, pessimism is often treated as a form of treason, as if only neoliberals and moral degenerates give up—or so goes the op-ed’s insisting upon the renewed possibility of redemption.

In response to these exhortations, pessimism offers a historical atheism, both methodologically and morally. The universe does not bend toward justice. Sometimes the universe bends toward the indifference of gravity wells and black holes. Affirming negativity, inspired by Achille Mbembe, is grounds for freedom, even if that freedom or relief is only fleeting and always insecure. I am not arrogant enough to think a book can attain freedom of this sort, but this book is inspired by refusals of critique as redemption in favor of useless critique and critique for its own sake.

That the pursuit of knowledge without immediate application is so thoroughly useless, even profane, is a diagnosis of our current moment. The neoliberal assault on the university is evidence of this condition, as is the current pitch of American politics. Our indifference as intellectuals to maximizing value has not gone unnoticed. We are still dangerous, worthy of vilification, of attack, sabotage, and derision because we fail so decadently. We are parasites according to Scott Walker, Donald Trump, and the rest. So be it. We are and shall remain irascible irritants to a worldwide assault on thinking that is well underway and facing few obstacles in other jurisdictions.

What would failed scholarship do? Learn to die, learn to live, learn to listen, learn to be together, and learn to be generous. These virtues are useless in that they do not prevent or manage things. They do not translate into learning objectives or metrics. Virtues of this order are selfsame, nontransferable experiences. They are meaningful but not useful. These are luxurious virtues. Like grieving or joy, they are ends unto themselves. But how will these ideas seek extramural grants, contribute to an outcomes-based education system, or become a policy recommendation? They will not, and that is part of their virtue.

Even if there is no straight line to where we are and where we ought to be, I think we should get over the idea that somehow the U.S. project of liberal empire is conflicted, or “more right than it is wrong,” or pragmatically preferable to the alternatives. I hope this book can contribute to the urgent necessity to get out of the way by reveling in the catastrophic failure that should inspire humility but instead seems to embolden too many to seek global control yet again. Demolition may be an affirmative act if it means insurgents and others can be better heard. And yet this may fail too. If we can accomplish nothing at all, we can at least, as Ta-Nehisi Coates and other pessimists have said, refuse to suborn the lie of America any longer. Telling the truth, even if it cannot change the outcome of history, is a certain kind of solace. In Coates’s words, there is a kind of rapture “when you can no longer be lied to, when you have rejected the dream.” Saying the truth out loud brings with it the relief that we are not crazy. Things really are as bad as we think.

If there are those of us who want to break from this one-hundred-year-old race to be the next Henry Kissinger, then why do we continue to seek respect in the form of recognizable standards of excellence? I am not sure where the answer finally lies, but I do know that professionalization will not save us. To appear as normal and recognizably rigorous will not be enough to stave off the neoliberal drive to monetize scholarship, or to demand of us strategically useful insights. The least we can do in the face of such a battle is to find comfort in meaningful ideas and the friendships they build rather than try to perform for those we know are the problem. Some will ask, who is this “we” or is that “they”—where is your evidence? More will know exactly what I am talking about.

The virtues I seek are oriented toward an academy of refuge, a place we can still live, no matter how dire the conditions of the university and the classroom. It is not the think tank, boardroom, or command center. We are, those of us who wish to be included, the last of the philosophers, the last of the lovers of knowledge, the deviants who should revel in what Harney and Moten have called the undercommons.

In one of his final lectures, Bataille speaks of the remnants of a different human species, something not quite so doomed, something that wasted its newly discovered consciousness and tool-being on the art that still marks the walls of prehistoric caves. This lingering minor or vestigial heritage is philosophy’s beginning. Philosophy survives war, atrocity, famine, and crusades. Thinking matters in a very unusual way. Thinking is not power or emancipation. Thinking matters for a sense of belonging to the world, and for believing in the fecundity of the world despite evidence to the contrary.

How do you get all this from pessimism, from failure? Because willing failure is a temptation, a lure to think otherwise, to think dangerous thoughts. Pessimism is a threat to indifferentism and nihilism in the sense of the phenomenon of Donald Trump. Pessimism is a provocation and an enemy of skepticism, particularly of the metaphysical variety. It is not redemption from these afflictions, but in pessimism there is solace in the real. To put it another way, to study the world as it is means to care for it.

The exhortation that our care or interest should be contingent on how useful the world is and how much of it conforms to our designs is as much opposed to care as it is to empiricism. We can study airports, poetry, endurance races, borders, bombs, plastic, and warfare, and find them all in the world. To consider the depth of their existence can be an invitation to the world rather than a prelude to another policy report. One cannot make a successful political career out of such pursuits, but you might be able to make a life out of it, a life worth repeating even if nothing else happens.

At the end of Jack Halberstam’s The Queer Art of Failure, we are presented with the Fantastic Mr. Fox’s toast as an exemple of something meaningful in these dark times of ours.

They say all foxes are slightly allergic to linoleum, but it’s cool to the paw—try it. They say my tail needs to be dry cleaned twice a month, but now it’s fully detachable—see? They say our tree may never grow back, but one day, something will. Yes, these crackles are made of synthetic goose and these giblets come from artificial squab and even these apples look fake—but at least they’ve got stars on them. I guess my point is, we’ll eat tonight, and we’ll eat together. And even in this not particularly flattering light, you are without a doubt the five and a half most wonderful wild animals I’ve ever met in my life. So let’s raise our boxes—to our survival.

Halberstam says of this queer moment:

Not quite a credo, something short of a toast, a little less than a speech, but Mr. Fox gives here one of the best and most moving—both emotionally and in stop-motion terms—addresses in the history of cinema. Unlike Coraline, where survival is predicated upon a rejection of the theatrical, the queer, and the improvised, and like Where the Wild Things Are, where the disappointment of deliverance must be leavened with the pragmatism of possibility, Fantastic Mr. Fox is a queerly animated classic in that it teaches us, as Finding Nemo, Chicken Run, and so many other revolting animations before it, to believe in detachable tails, fake apples, eating together, adapting to the lighting, risk, sissy sons, and the sheer importance of survival for all those wild souls that the farmers, the teachers, the preachers, and the politicians would like to bury alive.

Although not as much fun as Halberstam’s monument to low theory, Savage Ecology is for all the other wild animals out there studying global politics. May we be buried alive together.

### 1NC – Martial Empiricism – Bousquet

#### The Role of the Judge is to adopt martial empiricism.

Bousquet et al ‘20

[Antoine Bousquet, University of London, Jairus Grove, University of Hawai‘i at Manoa, and Nisha Shah University of Ottawa. 2020. “Becoming war: Towards a martial empiricism,” <https://journals.sagepub.com/doi/full/10.1177/0967010619895660>] pat

Haunting the formations and deformations of global life, war confronts us as an abyss in the face of which cherished interpretative frameworks perilously buckle and warp. Indeed, Tarak Barkawi and Shane Brighton (2011: 129) accurately identify a ‘conceptual black hole surrounding the notion of war’ that has insistently gnawed at the study of the phenomenon. Locating the source of this lacuna in the absence of an ‘ontology of war’, they propose to ground one in ‘fighting’ (Barkawi and Brighton, 2011: 136). Although we concur on the diagnosis, we take issue with the suggested remedy. War does not obey any neat philosophical division between epistemology and ontology. For us, the resolute elusiveness of any definitive understanding of war is inherent in that very object. Every attempt to conceptually shackle war is undone by the creative advance of its new modes, residences and intensities. This speaks against the value of ontology per se less than it calls for a strange, paradoxical and provisional ontology that is consonant with the confounding mutability of war. Such an ontology, suspended between infinity and totality, being and nothingness, the sheer fecundity and utter catastrophe of war, may not be too uncanny for its object. In fairness, Barkawi and Brighton (2011: 133) gesture towards this in acknowledging ‘war’s recalcitrance as an object of knowledge’ and allowing for war to unmake any truth. Yet they seem unwilling to embrace the full force of their own insight, which Marc von Boemcken (2016: 239) ultimately declares: ‘even the statement that “war is fighting” may well be eventually undone by war. In a very fundamental manner, war escapes human intelligibility.’

This special issue on ‘Becoming War’ grapples with war as obdurate mystery. In its recurring persistence yet constant reinvention, its paradoxical ordering of life for the generation of death, or its stubborn affront to the better world we all purport to want, war never ceases to perplex us. Our world is one shot through by war, manifest in the nation-states we inhabit, the ecologies of technics that bind us to one another, and the very thoughts ricocheting through our communities of sense. And yet we still do not know war.

Rather than endeavour yet again to ‘say something fundamental about what war is’ (Barkawi and Brighton, 2011: 134, emphasis in original), we choose to explore how war becomes. This is not to say that we deny any durability or regularities in the phenomenon of war over time. Simply that, as Alfred Whitehead (1978: 35) puts it, ‘there is a becoming of continuity, but no continuity of becoming’. Accordingly, we seek to trace the lines of becoming that congeal into what comes to count as war, even as it continually frays at the edges and insolently defies habituated frames of reference. We do not, therefore, offer a theory of continuity, a formula for what all lines of becoming war might have in common, but instead sketch a style of investigation that encompasses both the enduring cohesion and the radical dispersion of war. We call this endeavour ‘martial empiricism’ to renounce attempts to devise a definitive theory of war. Instead, we favour an open-ended conceptual arsenal for following the trail of war wherever it leads us, as opposed to camping in the places where we already expect to find it.

Although we do not aim to circumscribe the remit of its investigations, martial empiricism is nonetheless inherently situational, spurred by the impulse to grasp the present martial condition we inhabit in all its calamity and promise. We would be far from the first to point out the growing inadequacy of the conceptual frameworks of war inherited from the Westphalian historical interval. Yet we still collectively flounder in the face of a combined and uneven landscape of armed conflict populated by metastasizing war machines encompassing overseas contingency operations, fullspectrum hybrid theatres, ethno-supremacist militias, crowd-sourced paramilitaries, Incel shooters and narco-state assassins. The game is definitely up when a task force led by the former head of United States Central Command can write that ‘basic categories such as “battlefield,” “combatant” and “hostilities” no longer have clear or stable meaning’ (Abizaid and Brooks, 2014: 35). Confronted with this reality and the persistent bewilderment it induces, we contend that a certain epistemic humility is in order. Rather than professing to know where war begins and ends, martial empiricism starts in the middle, with only the barest tentative intuitions necessary to explore the logistics, operations and embodiments that engender armed conflict as an unremitting condition of global life.

## Case

### 1NC – Util – Grove

#### Utilitarian calculus doesn’t account for the geopolitical structure of aggregate conceptions of the good – that makes it incapable of grappling with the causes of apocalypse.

Grove ‘19

[Jarius, PoliSci at the University of Hawai’i. 2019. “Savage Ecology: War and Geopolitics in the Anthropocene.”] pat – ask me for the PDF!

Rather than see these two career trajectories as opposed, I think Crutzen’s thinking displays a continuous concern for the Northern Hemisphere and a particular cartography, rather than a geography, of human survival. Crutzen, as well as the concept of the Anthropocene itself, cannot escape preceding geopolitical conceptions of the Earth. Crutzen and others who rush so quickly to the necessity to transition efforts from climate abatement to climate modification are unsurprisingly not moved by claims that artificial cooling will likely cause droughts and famines in the tropics and subtropical zones of the global south; nor are they moved by how such plans may accelerate ocean acidification. The utilitarian risk calculus that favors the greatest good for the greatest number has no geographical or historical sensibility of how unequally aggregate conceptions of the good are distributed around the planet.

Global thinking, even in its scientific and seemingly universalist claims to an atmosphere that “we” all share, belies the geopolitics that enlivens scientific concern, as well as the global public policy agenda of geoengineering that seeks to act on behalf of it. Saving humanity as an aggregate, whether from nuclear war, Styrofoam, or climate turbulence, has never meant an egalitarian distribution of survivors and sacrifices. Instead, our new cosmopolitanism—the global environment—follows almost exactly the drawn lines, that is, the cartography or racialized and selective solidarities and zones of indifference that characterize economic development, the selective application of combat, and, before that, the zones of settlement and colonization. More than a result of contemporary white supremacy or lingering white privilege, the territorialization of who lives and who dies, who matters and who must be left behind for the sake of humanity, represents a five-hundred-year geopolitical tradition of conquest, colonization, extraction, and the martial forms of life that made them all possible through war and through more subtle and languid forms of organized killing.

I am not suggesting that Crutzen and others are part of a vast conspiracy; rather, I want to outline how climate change, species loss, slavery, the elimination of native peoples, and the globalization of extractive capitalism are all part of the same global ordering. That is, all of these crises are geopolitical. The particular geopolitical arrangement of what others have called the longue durée, and what I am calling the Eurocene, is geologically significant but is not universally part of “human activity” despite the false syllogism at the heart of popular ecological thinking that a global threat to humanity must be shared in cause and crisis by all of humanity.

Departing from Sloterdijk, I am hesitant to so easily locate modernity or explication as the root or cause of the global catastrophe. No single strategy, war, act of colonization, technological breakthrough, or worldview fully explains the apocalypse before us. However, there is something like what Gilles Deleuze and Félix Guattari call a refrain that holds the vast assemblage together, a geopolitical melody hummed along with the global expansion of a form of life characterized by homogenization rather than diversification. Accordingly, if we are to make some sense of such a vast world that is, even for Crutzen and Birks, “quite complex and difficult to model,” I think we must consider the particular refrain of geopolitics that is capable of, by scientific as well as more humbly embodied standards, destroying worlds along with the world. To eschew geopolitics simply because, as a refrain, it is too big, too grand, or too universal would ignore the conditions of possibility for nuclear weapons, power politics, and carbon-based globalization, and would greatly impoverish the explanatory capability of even the best climate models. So maybe it is not so strange that Crutzen and others’ attention to the nuclear threat of great powers has all but disappeared despite the fact that Russia and the United States still possess thousands of nuclear weapons, and as of late have been all too vocal about using them. Instead, the Anthropocene, as envisioned by Crutzen as a universal concern, requires with it a depoliticization of the causes of that concern.

### 1NC – Kessler

#### Risk is low – sat designs and cleanup checks.

O’Gorman 18 (John, MA thesis submitted to Rochester Institute of Technology, “The Cost of Clean Space- A Study of the Additional Fuel Costs of Launching Above Low Earth Orbit,” 5-18, <https://pdfs.semanticscholar.org/d703/101d657334d2e1575d08005e290578770cd1.pdf?_ga=2.70400848.1753078645.1567896134-909185996.1567896134>)

To conclude, orbital debris is a current issue and has the potential to be a serious problem in the coming decades and centuries if business as usual is conducted. Fortunately, steps are being taken now which can mitigate this disastrous scenario. The space community is still relatively small and better rocket and satellite design is helping to avoid the accidental creation of debris. Studies over the feasibility of pulling large objects from orbit have already been done and they show a large amount of promise for managing the future creation of debris very effectively. Although current international policies managing debris do not yet exist, the discussion over how space will be managed is already well underway. If sound debris policies can come out of these discussions, the utility of LEO can be preserved for future generations.

#### Kessler Syndrome false – less debris and existing guidelines solve

Lewis 15 (Hugh, Senior Lecturer in Aerospace Engineering at the University of Southampton, “Space debris, Kessler Syndrome, and the unreasonable expectation of certainty.” Room, <https://room.eu.com/article/Space_debris_Kessler_Syndrome_and_the_unreasonable_expectation_of_certainty>, Accessed 8/10/19, JMoore)

There is now widespread awareness of the space debris problem amongst policymakers, scientists, engineers and the public. Thanks to pivotal work by J.C. Liou and Nicholas Johnson in 2006 we now understand that the continued growth of the debris population is likely in the future even if all launch activity is halted. The reason for this sustained growth, and for the concern of many satellite operators who are forced to act to protect their assets, are collisions that are expected to occur between objects – satellites and rocket stages – already in orbit. In spite of several commentators warning that these collisions are just the start of a collision cascade that will render access to low Earth orbit all but impossible – a process commonly referred to as the ‘Kessler Syndrome’ after the debris scientist Donald Kessler – the reality is not likely to be on the scale of these predictions or the events depicted in the film Gravity. Indeed, results presented by the Inter-Agency Space Debris Coordination Committee (IADC) at the Sixth European Conference on Space Debris show an expected increase in the debris population of only 30% after 200 years with continued launch activity. Collisions are still predicted to occur, but this is far from the catastrophic scenario feared by some. Constraining the population increase to a modest level can be achieved, the IADC suggested, through widespread and good compliance with existing space debris mitigation guidelines, especially those relating to passivation (whereby all sources of stored energy on a satellite are depleted at the end of its mission) and post-mission disposal, such as de-orbiting the satellite or re-orbiting it to a graveyard orbit. Nevertheless, the anticipated growth of the debris population in spite of these robust efforts merits the investigation of additional measures to address the debris threat, according to the IADC.

#### Untrackable debris thumps – some is way too small to detect.

#### Global ADR development already exists – solves.

Zachary Keck, Wohlstetter Public Affairs Fellow at the Nonproliferation Policy Education Center, 6-17-2018, "Space Is Truly the Final Frontier (For the Next Great War)," National Interest, https://nationalinterest.org/blog/the-buzz/space-truly-the-final-frontier-the-next-great-war-26284

The first type of dual-use spacecraft—called active debris removal (ADR)—are designed to deal with the rapidly growing problem of space debris. One preliminary ADR example came from China in June 2016 when it launched the "Aolong-1" spacecraft, which was a demonstrator device. These ADR spacecraft—which are also being developed by the United States, European Union, and Russia— can retrieve debris floating in space. Then, the ADR spacecraft bring the debris down to re-enter the atmosphere, destroying it by the intense frictional heat. Alternatively, they can also instead place the debris in graveyard orbits to reduce the probability of colliding with operational satellites.

ADR spacecraft are unavoidable given the growing nature of the space debris problem. Previous estimates have suggested that starting in 2020 the world would need to remove an average of five massive objects (such as decommissioned satellites and derelict rockets) from low earth orbit (LEO) each year to deal with the problem. Others have estimated that the number is closer to ten that will need removal. However, as Chow points out, these estimates fail to consider the massive expansion in the number of LEO satellites entering space. As of August 31, 2017, only 1,071 LEO satellites were orbiting the earth. Over the next decade, however, between 14,000 and 16,000 additional LEOs are expected to be launched. This makes the space debris problem more difficult, and debris removal spacecraft that much more important.

The problem is that the same spacecraft that can remove debris can also be used as “space stalkers.” Space stalkers, as Chow previously described them, "could be placed on orbit in peacetime and maneuvered to tailgate U.S. satellites during a crisis. At a moment's notice, they could simultaneously attack multiple critical satellites from such close proximity that the United States would not have time to prevent damage." Since ADR spacecraft are designed to get close to and remove debris, they necessarily have the capability to get close to and snatch essential satellites that U.S. military relies on.

Additionally, ADR spacecraft are not the only dual-use problem. Many of the same countries developing ADR capabilities are also building maintenance spacecraft. These spacecraft—called on-orbit servicing (OOS)—also maneuver themselves to be in physical contact with satellites to perform any number of maintenance tasks. These tasks include, "high-resolution inspection; correction of some types of mechanical anomalies, such as solar array and antenna deployment malfunctions; relocation and other orbital maneuvers; installation of attachable payloads to enable upgrades or new capabilities; and refueling to extend the service life of satellites."

Once again, the issue is that these OOS spacecraft can be quickly repurposed to take out critical satellites during a crisis or conflict. In fact, these OOS spacecraft are even better space stalkers than ADR ones because they have more advanced rendezvous and robotic capabilities.

This is not some distant problem. Chow notes that the first ADR and OOS spacecraft are likely to become operational sometime in the early part of the next decade. “In effect,” he writes, “weaponization of space will happen by default in the early 2020s and beyond and will be unavoidable and irreversible.” It will only grow worse with time as more countries launch ADR and OOS spacecraft and their capabilities for rendezvous and proximity operations improve.

### 1NC – Space War

#### No miscalc or escalation

James Pavur 19, Professor of Computer Science Department of Computer Science at Oxford University and Ivan Martinovic, DPhil Researcher Cybersecurity Centre for Doctoral Training at Oxford University, “The Cyber-ASAT: On the Impact of Cyber Weapons in Outer Space”, 2019 11th International Conference on Cyber Conflict: Silent Battle T. Minárik, S. Alatalu, S. Biondi, M. Signoretti, I. Tolga, G. Visky (Eds.), <https://ccdcoe.org/uploads/2019/06/Art_12_The-Cyber-ASAT.pdf>

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.

#### SQUO solves miscalc – we are SSA sharing

Sadeh 10 Eligar Sadeh, Astroconsulting International LLC Pages 7-18 | Published online: 15 Jul 2010 Report: United States-China Space Dialogue Project https://www.tandfonline.com/doi/full/10.1080/14777622.2010.494513

The United States Government is currently implementing the Commercial and Foreign Entities (CFE) program that incorporates SSA data sharing on maneuver notification, debris mitigation, end of life management for space assets, and respect of protected regions in space. CFE does offer a venue for U.S.-China cooperation on these set of issues. Currently, the United States and China do cooperate in the area of collision avoidance and conjunction assessments.

### 1NC – Grids !D

#### Grids resilient

* Threat can’t be scaled up because of sheer complexity
* US power plants have been resilient to attacks and have become more effectively resilient over time
* Threat is overblown- tons of news articles rely on misinformation and hype to sell to readers
* Power plants are isolated from the internet and extremely decentralized
* Russia is only attempting reconnaissance and has no incentive to attack
* Attacks only last a few hours because of backup generators

Wagenseil 19[Paul Wagenseil, Senior Editor of security and privacy @ Tom’s Guide, Citing Selena Larson, intelligence analyst @ Dragos Cybersecurity Firm, 3/11/2019, “Hackers Can't Cause ~~Crippling~~ [Devastating] Blackouts, Expert Says”, https://www.tomsguide.com/us/blackout-hack-threat-rsa2019,news-29594.html]

SAN FRANCISCO — Don't believe the hype. Hackers cannot easily take down the North American electrical grid to cause massive blackouts, despite numerous news stories, magazine articles and books claiming that they can, a cybersecurity expert told the last week's RSA Conference.

"There are lots of misunderstandings about threats to the electric grid," said Selena Larson, an intelligence analyst at Maryland cybersecurity firm Dragos and a former CNN reporter. "The reality is that a destructive incident at one site would require highly tailored [malware] tools and operations, and would not effectively scale."

That's because U.S. power plants use different makes and models of hardware and software, are often at least partly isolated from the internet and from each other, and have already undergone a fair degree of hardening against cyberattacks. There's very little chance that a single hacker or group of hackers could knock out the power across a large swath of North America at once.

Scary headlines

Those inconvenient facts haven't prevented journalists and writers from penning what Larson deemed needlessly alarming stories. One July 2018 opinion piece in The New York Times entitled "To Hackers, We're Bambi in the Woods" began with a nightmare scenario of an America thrown back to the Stone Age by a cyberattack that kills the power, stops the trains, empties bank accounts and opens literal floodgates.

Later that same month, The Wall Street Journal ran a story called "Russian Hackers Reach U.S. Utility Control Rooms, Homeland Security Officials Say," lending credence to the nightmare scenario. But it was incorrectly reported — it was based on old information that had been revisited in a DHS presentation.

Larson didn't mention "Lights Out: A Cyberattack, A Nation Unprepared, Surviving the Aftermath," a best-selling 2015 book by former ABC News anchor Ted Koppel.

"A well-designed attack on just one of the nation's three electric power grids could cripple much of our infrastructure — and in the age of cyberwarfare, a laptop has become the only necessary weapon," reads the jacket blurb following another apocalyptic scenario of a months-long blackout leading to societal collapse.

State-sponsored attacks

The truth is that Russian hackers do try to get into American power plants, but so far they've only seemed to be performing reconnaissance, Larson said. Destructive malware has infected the office networks of some power companies, but the companies weren't specifically targeted, and the malware didn't cross over into plant operations.

"A ransomware infection at the financial-services division of an electric utility doesn't automatically translate to a blackout," Larson said.

While most state-sponsored hacker groups targeting power plants and other industrial-control systems only gather information, two other have gone further, Larson said. Those were the Electrum group, which used malware dubbed CrashOverride to take down a Ukrainian power plant in 2016, and the Trisis group, which infected the safety systems at a Saudi petrochemical plant in 2017.

Both attacks have been attributed to Russian state-sponsored hackers, and the Saudi-plant attack led another presenter at RSA 2019 to conclude that cyberattacks would soon kill people, either deliberately or accidentally.

But as Dragos founder and CEO Robert M. Lee stated in a 2017 blog posting describing the CrashOverride malware, "the public must understand that the outages could be in hours or days, not weeks or months."

Lee said that Dragos had "high confidence" that the CrashOverride hackers were the same who had in fact targeted U.S. and European infrastructure companies in 2014. And CrashOverride contained modules to "delete files and processes off of the running systems" to sabotage computer systems.

Larson said, however, that the CrashOverride creators had spent months or years planning the attack, and that the malware was specifically designed for that power plant. The attacks couldn't easily scale across the world, or even across Ukraine.

Outlook

There are true cyberattack threats out there, Larson added. For example, the Russian NotPetya ransomware worm in June 2017 cost the Maersk shipping line an estimated $200 million, and FedEx an estimated $300 million. The North Korean WannaCry attack the previous month crippled hospital computer systems in Europe and North America.

But in terms of the North American power grid, small animals such as squirrels, cats and raccoons are a much larger threat than hackers, and have caused hundreds of localized blackouts, Larson said. That mundane detail doesn't sell books.

The public should be reassured, she added, that the North American power grid (there are in fact three grids) has always been engineered to limit both the duration and the geographic reach of blackouts, and that there's no single power switch that can turn it all off.

"The truth is that the North American electric grid is resilient and segmented,"

### 1NC – Ocean Acid

#### Lol this internal link is ass – zero warrant for “monitoring = reversal” – begging u to read the evidence Randall.

#### Adaptation, species adjustment, and migration means no bioD collapse from acidification

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ONE OF THE consequences of pumping more and more carbon dioxide into the atmosphere is the changing chemistry of the world’s oceans. Until now, the ocean has acted as a big sponge, soaking up about one-third of the CO2 released by human activities. But now, scientists are watching a vast experiment unfold. All that carbon dioxide is triggering chemical reactions that is turning the oceans more acidic, which in turn is making life tough for lots of marine organisms. Oysters and other shellfish have been hit by die-offs in the Pacific Northwest and Gulf of Maine, while tropical reefs are dissolving faster than they can rebuild, according to a recent study in the journal Science. Some researchers are seriously considering geoengineering to reverse the slow acidification of the ocean. Dissolving minerals like olivine or limestone into seawater would increase its alkalinity. (Remember the pH strip in your 10 gallon fish tank? Blue=alkaline, red=acidic.) Not only would that make it easier on marine life, but it would also allow the ocean-sponge to soak up more carbon dioxide from the atmosphere. Two British scientists proposed this idea last year in a paper in the journal Reviews of Geophysics, predicting that with a bit more research (and money) it may be possible to capture hundreds of billions to trillions of tons of carbon without messing up the marine ecosystem. RITA ERVEN/GEOMAR But this kind of massive planetary experiment needs lots of small-scale work in the laboratory before it's ready. So in the meantime, marine scientists are trying to find which species will come out on top in a more acidic ocean. In Sweden, a group of researchers tested survival in an artificially acidic ocean. In a fjord, they built an enclosed, floating test tube they called a “mesocosm” and filled it with phytotoplankton, zooplankton, and tiny herring larvae. Then they turned up the dissolved carbon dioxide, tracking herring survival over time as the acidity increased. A similar lab experiment with codfish, another important Northern European food fish, killed off the fish. “Our surprise is that we didn’t find that,” said Catriona Clemmesen-Bockelmen, a marine ecologist from the GEOMAR Helmoltz Center for Ocean Research in Kiel, Germany, and a co-author on the study in Nature Ecology and Evolution. “Instead, we had a higher survival rate.” The herring, it seemed, liked the extra acidity. Why? Two things. First, the higher dissolved CO2 led to a bloom in plankton—food for the fish. Second, it turns out that herring spawn mostly near the ocean bottom, where CO2 levels are already naturally high. That means they are better adapted to ocean acidification than other species like the cod that spawn near the surface. Does that mean the herring come out on top in an acidic ocean? It depends. Clemmesen-Bockelmen says that ocean temperature is also a big factor for fish larvae. Fish could swim north to find cooler waters, but they wouldn't necessary find the right food in a new ecosystem. “There will be winners or losers depending on adaptation and biology, but there also could be shifts in the species,” she says. Codfish that live in the eastern Baltic Sea, for example, have already adapted to a habitat with changing pH (because of the region’s notoriously poor water quality), while its cousins in the North Atlantic are in a more stable environment and more sensitive to shifts in pH. At New Jersey’s Rutgers University, marine ecologist Grace Saba wants to know more about the ecological winners and losers on this side of the Atlantic Ocean. Next month, she is preparing to launch one of the first ocean acidity sensors on an underwater drone that will dive into cold pool of bottom water that sits on the US continental shelf, stretching from Virginia to the tip of Long Island and about 30 to 130 miles offshore. This region is home to commercially important fishes, as well as wild stocks of quahogs, scallops, and surf clams that can't swim away from growing acidic waters. "They are just stuck there,” Saba says. The drone sensor will give her and colleagues data on changing water chemistry more quickly than the current ocean acidification testing conducted every four years by NOAA oceanographic vessels. “For me it was an eye opener that we need to get out there and sample," she says. From Baltic cod to New England scallops, the ocean ecosystem is changing as we pump more greenhouse gases into the atmosphere. Scientists realize that the ocean doesn't behave like a chemistry equation, or an algorithm, and they will continue to uncover unintended consequences. Ecological winners will emerge and thrive, "losers" will migrate or die.