### 1AC – Plan

#### Plan – The appropriation of outer space through the production of orbital debris by private entities is unjust. I’ll defend the resolution as a value statement.

#### Orbital debris is

NASA.gov 21 [NASA – 5/26/21. “Space Debris and Human Spacecraft.” <https://www.nasa.gov/mission_pages/station/news/orbital_debris.html>] Justin

Orbital Debris

Space debris encompasses both natural meteoroid and artificial (human-made) orbital debris. Meteoroids are in orbit about the sun, while most artificial debris is in orbit about the Earth (hence the term “orbital” debris).

Orbital debris is any human-made object in orbit about the Earth that no longer serves a useful function. Such debris includes nonfunctional spacecraft, abandoned launch vehicle stages, mission-related debris, and fragmentation debris.

### 1AC – Advantage

#### The private sector locks in the Kessler Syndrome as a structurally inevitability by 2035. The debris threat isn’t internalized, engineering studies, profit-motive AND inefficient guidelines.

Rao and Rondina 2/16/22 [Akhil Rao and Giacomo Rondina. \*Middlebury College in the Department of Economics. \*\*University of California, San Diego. “Open access to orbit and runaway space debris growth.” <https://arxiv.org/pdf/2202.07442.pdf>] Justin

In this paper we present a dynamic physico-economic model of orbit use under rational expectations with endogenous collision probability and Kessler Syndrome. We show how both economic and physical parameters drive equilibrium short- and long-run orbital-use patterns, derive the marginal external cost of a satellite, explore the multiplicity and stability of openaccess steady states, and examine the relationships between open-access orbit use, optimal orbit use, and Kessler Syndrome. We then calibrate the model to an important region of LEO and estimate the likely times when Kessler Syndrome will occur under different patterns of satellite industry economics. We highlight three messages regarding orbital-use management.

First, under open access too many firms will launch satellites because they won’t internalize the risks they impose on other orbit users. Though profit maximizing satellite owners have incentives to reduce launches as the risk of a collision grows, they do not respond to debris growth or collision risk optimally. This inefficiency is independent of whether Kessler Syndrome is possible or not. Unlike many other bioeconomic commons problems, higher discount rates can induce less (rather than more) open-access overexploitation.

Second, Kessler Syndrome is possible as long as debris objects can collide with each other and generate new fragments, i.e the new fragment formation debris coupling exists. Engineering studies indicate that this coupling does in fact exist. Due to open access, even profit maximizing firms with rational expectations may continue to launch satellites despite recognizing their role in causing Kessler Syndrome and even after the Kessler threshold has been crossed.

Third, under open access Kessler Syndrome is more likely as the excess return on a satellite rises, even if firms will respond to orbital congestion by launching fewer satellites. As launch costs fall and new commercial satellite applications become viable, LEO is thus increasingly and inefficiently likely to experience Kessler Syndrome. While it may seem paradoxical that the very changes which make orbit use profitable can also increase the risk of resource collapse, such dynamics occur frequently in bioeconomic commons problems. Calibrated simulations reveal that space economy growth rates projected by investment banks and industry associations are consistent with Kessler Syndrome occurring as early as 2035. Our results suggest that, absent institutional reform, continued growth of the space economy may trigger Kessler Syndrome in the near future. This can occur even in regions perceived to have relatively high rates of natural renewability, providing new evidence that compliance with the 25-year rule is insufficient to ensure sustainable orbit use.

#### Fragmentation leads to speedy debris – that’s laws of physics.

Aerospace.org n.d. [As an independent, nonprofit corporation operating the only FFRDC for the space enterprise, The Aerospace Corporation performs objective technical analyses and assessments for a variety of government, civil, and commercial customers. “SPACE DEBRIS 101.” AEROSPACE. <https://aerospace.org/article/space-debris-101>] Justin

Can you see space debris coming at you?

It is very unlikely that you would see space debris. Relative to a person in orbit, space debris is moving about ten times faster than a bullet, and the vast majority of debris is as small as or smaller than a bullet. No one can see a bullet coming, let alone an object moving ten times faster.

What is an on-orbit collision like?

It looks more like an explosion of each object, as if they passed through each other and exploded on the other side. A hyper-velocity collision like those at orbital speed doesn’t behave like collisions that we are used to seeing. The objects are moving so fast that they travel through each other faster than the shock waves can travel. The shock waves in the structures of each object then shatter them into fragments of varying sizes and, in the process, give each fragment a boost in a different direction. Each one of these fragments is then in a different orbit than the original object and will move away according to the laws of orbital motion. With thousands of fragments, each moving in slightly different directions, it looks a lot like an explosion.

Do breakups look like the movies?

For dramatic purposes, movies, TV, and commercials tend to show space breakups at a much slower speed than they would happen at in real life. A breakup in space, especially a collision, can involve a lot of energy, and the pieces are flung away at extremely high speeds. Since there is no air to slow the pieces down the fragments would all fly away from one another and rapidly disappear from view. For many breakups, a softball-sized fragment would fly the length of the space station (a little less than a football field) in less than half a second. If you were watching it from nearby, you would see a flash, and the object that broke up would just disappear and be gone. It would be very unlikely for you to see pieces drifting away. Similarly, a low orbit space collision is unlikely to look much like a car crash — the speeds are much too high. The collisions would look like explosions to a nearby observer.

#### Debris cascades triggers global grid shutdown---generator dispersion is dependent on satellites.

Silberg 1/26/14 [Bob Silberg, NASA’s Jet Propulsion Laboratory. “Satellites help power grid keep its balance.” Climate.NASA.Gov. <https://climate.nasa.gov/news/1027/satellites-help-power-grid-keep-its-balance/>] Justin

Imagine a generator pumping more electricity than a nuclear power plant into the grid, but inconsistently and without the grid’s caretakers being able to see what it was doing. How could they maintain the critical balance between generation and consumption that the grid requires? A key to the answer hovers some 22,000 miles overhead.

The amount of electricity fed into an electrical grid at any given moment must equal the amount that is being used at that moment. Too much or too little could damage the millions of electrical devices connected to the grid or even trigger a power outage. Nine of North America’s largest grids have special independent organizations charged with maintaining that balance.

California Independent Service Operator (ISO) manages the grid that serves most of California and a chunk of Nevada. They rebalance the grid’s intake and output every four seconds, using sophisticated algorithms to forecast demand and a variety of ways to adjust the wattage they introduce into the system throughout the day. But they can only manage what they can see: the big power plants that produce the bulk of the system’s electricity. “We can’t see the solar panels on the rooftop of your house,” said Jim Blatchford, the ISO’s short-term forecasting manager. “We don’t know how much they are reducing your demand or feeding back into the grid.” And that’s a significant challenge.

More electricity than a power plant

The nearly 200,000 solar installations on private homes and businesses in California, taken together, generate more electricity than any power plant in the state. Clearly, grid managers need to take them into account to calculate accurately how much electricity the grid should carry.

But this multitude of small solar setups is scattered over a vast area with a wide range of highly variable weather conditions that affect how much sunlight each one receives—and therefore how much electricity it produces—at any given moment. The sun may shine brightly on a rooftop in Bakersfield while a bungalow in Santa Monica is shrouded in fog. When the fog lifts and those panels begin to produce, a morning shower may dampen productivity in San Francisco while a giant cloud bank plays peekaboo with the sun over Sacramento.

Tracking all those solar panels and their ever-changing environments may seem like herding cats, but a company called Clean Power Research (CPR) has developed a solution that the California ISO is currently testing. CPR accumulated information about the state’s small solar installations by playing a role in registering them for rebates. So they know where the solar panels are and the size, angle and shading characteristics of each group.

What remains is to determine how much sunlight reaches each set of solar panels at any given time, and that’s where the Geostationary Operational Environmental Satellite (GOES) system comes in.

CPR uses a stream of data from GOES in real time to characterize how much sunlight each relevant square kilometer of California is receiving and to forecast how the picture is going to change over the course of a week. “If you look at a series of those GOES images, you can track the motion of the clouds,” said Adam Kankiewicz, Solar Research Specialist at CPR. “You can say if it’s gone from here to here in the last hour, we predict that it’s going to go, say, 10 kilometers in that direction in two hours. For short-term forecasting, that's the most accurate method out there.”

Hour by hour

“We model each of those nearly 200,000 systems individually,” said Mark Liffmann, who is Vice President of Business Development, Sales and Marketing at CPR. “We use the irradiance (the measurement of sunlight intensity) to determine how much electricity each system is likely to produce each hour for the next seven days, and then we aggregate those forecasts and feed that into the ISO’s software so they can determine how much generation they’ll need to meet the net load.”

CPR’s software and the ISO’s software engage in an ongoing dialogue to keep the balancing authority up to date. “It needs to happen quickly in real time,” Liffmann said. “You need the ongoing forecast continuously to be able to accurately calculate what solar panels are going to provide and therefore what traditional resources you are going to need to turn on and off.”

California ISO’s Blatchford points out that the monitoring and forecasting that GOES enables can also help his organization determine what to expect from the large, commercial solar stations in its system. Their output is just as dependent on weather conditions as a small rooftop system.

“The sun angle plays a big part in it, too,” he said. “A cloud 10 miles away from the plant could be in between the plant and the sun.”

Despite the challenges they present, having California’s single largest generator in the form of 200,000 widely dispersed solar-panel setups has a big potential upside. “It gives you two advantages,” Liffmann said. “One, you don’t have a single point of failure. If one system goes down, it’s a small percentage of the total generation. The other is that it smooths out a lot of the weather variation. As long as you can forecast it well, it’s a great benefit.”

And the view from 22,000 miles up is indispensible to making those forecasts. “GOES satellites are the only available source for the images we need over North America,” Kankiewicz said.

#### Grid security is an impact filter.

Denkenberger 21 – David Denkenberger, Anders Sandberg, Ross John Tieman, and Joshua M. Pearce, \*Assistant professor of mechanical engineering at University of Alaska Fairbanks, “Long-term cost-effectiveness of interventions for loss of electricity/industry compared to artificial general intelligence safety,” 2021, *European Journal of Futures Research*, Vol. 9, Issue 1, https://doi.org/10.1186/s40309-021-00178-z, EA Recut Justin

Civilization relies on a network of highly interdependent critical infrastructure (CI) to provide basic necessities (water, food, shelter, basic goods), as well as complex items (computers, cars, space shuttles) and services (the internet, cloud computing, global supply chains), henceforth referred to as industry. Electricity and the electrical infrastructure that distributes it plays an important role within industry, providing a convenient means to distribute energy able to be converted into various forms of useful work. Electricity is one component of industry albeit a critical one. Industry provides the means to sustain advanced civilization structures and the citizens that inhabit them. These structures play a critical role in realizing various futures by allowing humanity to discover and utilize new resources, adapt to various environments, and resist natural stressors.

Though industry is capable of resisting small stressors, a sufficiently large event can precipitate cascading failure of CI systems, resulting in a collapse of industry. If one does not temporally discount the value of future people, the long-term future (thousands, millions, or even billions of years) could contain an astronomically large amount of value [18]. Events capable of curtailing the potential of civilization (existential risks, such as human extinction or an unrecoverable collapse) would prevent such futures from being achieved, implying reducing the likelihood of such events is of the utmost importance [100]. Reducing the prevalence of existential risks factors; events, systemic structures, or biases which increase the likelihood of extinction but do not cause extinction by themselves is also highly valuable. Complete collapse or degraded function of industry would drastically reduce humanity’s capacity to coordinate and deploy technology to prevent existential risks, representing an existential risk factor. Consequently, interventions preventing loss of industry, reducing the magnitude of impacts, or increasing speed of recovery could be extremely valuable.

Existential risk research is, by nature, future focused, requiring the investigation of events that have not yet occurred. Futures studies methodologies are often applied to uncover salient trends or events, and explore potential causal structures [54, 123]. Probabilistic modeling techniques can then be used to determine the likelihood of such events occurring, including adequate treatment of uncertainty [101]. The cost-effectiveness modeling approach outlined in this paper is an example of this, attempting to assess the marginal utility of losing industry interventions on improving the long-term future. This approach could guide future efforts to assess the relative cost-effectiveness of interventions for different risks, existential or otherwise. More practically, this research can inform prioritization efforts of industrialized countries by providing estimates of the cost of global industrial collapse, and the utility of resilience interventions. This is relevant to the European Union which has a highly industrialized economy, providing $2.3 Trillion USD of the $13.7 Trillion USD global total of value add manufacturing [122]. The EU has shifted toward a more proactive foresight approach about natural and man-made disasters, noting the importance of rare high-impact events, systemic risks, and converging trends requiring better data and forecasting to drive a more ambitious crisis management system [47]. Still, it is clear that most academic and institutional emphasis has been on “ordinary” rather than extreme disasters, and risks from industry to the public and environment rather than widespread failures of industrial services causing harm. The integrated nature of the electric grid, which is based on centralized generation makes the entire system vulnerable to disruption.1 There are a number of anthropogenic and natural catastrophes that could result in regional-scale electrical grid failure, which would be expected to halt the majority of industries and machines in that area. A high-altitude electromagnetic pulse (HEMP) caused by a nuclear weapon could disable electricity over part of a continent [16, 48, 66, 93]. This could destroy the majority of electrical grid infrastructure, and as fossil fuel extraction and industry is reliant on electricity [49], industry would be disabled. Similarly, solar storms have destroyed electrical transformers connected to long transmission lines in the past [117]. The Carrington event in 1859 damaged telegraph lines, which was the only electrical infrastructure in existence at the time. It also caused Aurora Borealis that was visible in Cuba and Jamaica [70]. This could potentially disable electrical systems at high latitudes, which could represent 10% of electricity/industry globally. Though solar storms may last less than the 12 h that would be required to expose the entire earth with direct line of sight, the earth’s magnetic field lines redirect the storm to affect the opposite side of the earth [117]. Lastly, both physical [6, 8, 69, 89, 111] and cyber attacks [3, 63, 90, 96, 118, 128, 130] could also compromise electric grids. Physical attacks include traditional acts of terrorism such as bombing or sabotage [130] in addition to EMP attacks. Significant actors could scale up physical attacks, for example by using drones. A scenario could include terrorist groups hindering individual power plants [126], while a large adversary could undertake a similar operation physically to all plants and electrical grids in a region. Unfortunately, the traditional power grid infrastructure is simply incapable of withstanding intentional physical attacks [91]. Damage to the electric grid resulting in physical attack could be long lasting, as most traditional power plants operate with large transformers that are difficult to move and source. Custom rebuilt transformers require time for replacement ranging from months and even up to years [91]. For example, a relatively mild 2013 sniper attack on California’s Pacific Gas and Electric (PG&E) substation, which injured no one directly, was able to disable 17 transformers supplying power to Silicon Valley. Repairs and improvements cost PG&E roughly $100 million and lasted about a month [10, 102]. A coordinated attack with relatively simple technology (e.g., guns) could cause a regional electricity disruption. However, a high-tech attack could be even further widespread. The Pentagon reports spending roughly $100 million to repair cyber-related damages to the electric grid in 2009 [57]. There is also evidence that a computer virus caused an electrical outage in the Ukraine [56]. Unlike simplistic physical attacks, cyber attackers are capable of penetrating critical electric infrastructure from remote regions of the world, needing only communication pathways (e.g., the Internet or infected memory sticks) to install malware into the control systems of the electric power grid. For example, Stuxnet was a computer worm that destroyed Iranian centrifuges [73] to disable their nuclear industry. Many efforts are underway to harden the grid from such attacks [51, 63]. The U.S. Department of Homeland Security responded to ~ 200 cyber incidents in 2012 and 41% involved the electrical grid [103]. Nations routinely have made attempts to map current critical infrastructure for future navigation and control of the U.S. electrical system [57]. The electric grid in general is growing increasingly dependent upon the Internet and other network connections for data communication and monitoring systems [17, 112, 118, 127, 135]. Although this conveniently allows electrical suppliers management of systems, it increases the susceptibility of the grid to cyber-attack, through denial of webpage services to consumers, disruption to supervisory control and data acquisition (SCADA) operating systems, or sustained widespread power outages [3, 72, 118, 120]. Thus global or regional loss of the Internet could have similar implications. A less obvious potential cause is a pandemic that disrupts global trade. Countries may ban trade for fear of the disease entering their country, but many countries are dependent on imports for the functioning of their industry. If the region over which electricity is disrupted had significant agricultural production, the catastrophe could be accompanied by a ~ 10% food production shortfall as well. It is uncertain whether countries outside the affected region would help the affected countries, do nothing, or conquer the affected countries. Larger versions of these catastrophes could disrupt electricity/industry globally. For instance, it is possible that multiple HEMPs could be detonated around the world, due to a world nuclear war [105] or due to terrorists gaining control of nuclear weapons. There is evidence that, in the last 2000 years, two solar storms occurred that were much stronger than the Carrington event [85]. Therefore, it is possible that an extreme solar storm could disable electricity and therefore industry globally. It is conceivable that a coordinated cyber or physical attack (or a combination) on many electric grids could also disrupt industry globally. Many of the techniques to harden the electric grid could help with this vulnerability as well as moving to more distributed generation and microgrids [23, 29, 75, 76, 103, 114]. An extreme pandemic could cause enough people to not show up to work such that industrial functioning could not be maintained. Though this could be mitigated by directing military personnel to fill vacant positions, if the pandemic were severe enough, it could be rational to retreat from high human contact industrial civilization in order to limit disease mortality. The global loss of electricity could even be self-inflicted as a way of stopping rogue artificial general intelligence (AGI) [124]. As the current high agricultural productivity depends on industry (e.g., for fertilizers), it has been assumed that there would be mass starvation in these scenarios [107].

Repairing these systems and re-establishing electrical infrastructure would be a goal of the long term and work should ideally start on it immediately after a catastrophe. However, human needs would need to be met immediately (and continually) and since there is only a few months of stored food, it would likely run out before industry is restored with the current state of preparedness. In some of the less challenging scenarios, it may be possible to continue running some machines on the fossil fuels that had previously been brought to the surface or from the use microgrids or shielded electrical systems. In addition, it may be feasible to run some machines on gasified wood [31]. However, in the worst-case scenario, all unshielded electronics would be destroyed.

#### Debris triggers miscalculated war.

Robert Farley 22, Now a 1945 Contributing Editor, Dr. Robert Farley is a Senior Lecturer at the Patterson School at the University of Kentucky. Dr. Farley is the author of Grounded: The Case for Abolishing the United States Air Force (University Press of Kentucky, 2014), the Battleship Book (Wildside, 2016), and Patents for Power: Intellectual Property Law and the Diffusion of Military Technology (University of Chicago, 2020). 1/9/22. [19 Fourty Five, “Does A Space War Mean A Nuclear War?,” <https://www.19fortyfive.com/2022/01/does-a-space-war-mean-a-nuclear-war/>] Justin

The recent Russian anti-satellite test didn’t tell the world anything new, but it did reaffirm the peril posed by warfare in space. Debris from explosions could make some earth orbits remarkably risky to use for both civilian and military purposes. But the test also highlighted a less visible danger; attacks on nuclear command and control satellites could rapidly produce an extremely dangerous escalatory situation in a war between nuclear powers. James Acton and Thomas Macdonald drew attention to this problem in a recent article at Inside Defense. As Acton and MacDonald point out, nuclear command and control satellites are the connective tissue of nuclear deterrence, assuring countries that they’re not being attacked and that they’ll be able to respond quickly if they are.

For a long time, these strategic early-warning satellites were akin to a center of gravity in ICBM warfare. Nuclear deterrence requires awareness that an attack is underway. Attacks on the monitoring system could easily be read as an attempt to ~~blind~~ an opponent in preparation for general war, and could themselves incur nuclear retaliation. Thus, the nuclear command and control satellites are critical to the maintenance of nuclear deterrence. They make it possible to distribute an order from the chief of government to the nuclear delivery systems themselves. Consequently, their destruction might lead to hesitation or delay in performing a nuclear launch order.

It was only later that the relevance of satellites for conventional warfare became clear. Satellites could reconnoiter enemy positions and, more importantly, provide communications for friendly forces. Indeed, the expansion of the role of satellites in conventional warfare has complicated the prospect of space warfare. States have a clear reason for targeting enemy satellites which support conventional warfare, as those satellites enable the most lethal part of the kill chain, the communications and recon networks that link targets with shooters. Thus, we now have a situation in which space military assets have both nuclear and conventional roles. In a conflict confusion and misperception could rapidly become lethal. If one combatant views an attack against nuclear command and control as a prelude to a general nuclear attack, it might choose to pre-empt.

Nuclear powers have dealt with problems in this general category for a good long while; would a conventional attack against tactical nuclear staging areas represent an escalation, for example? Would the use of ballistic missiles that can carry either conventional or nuclear weapons trigger a nuclear response? Do attacks against air defense networks that have both strategic and tactical responsibilities run the risk of triggering a nuclear response? There’s also the danger that damage to communications networks designated for conventional combat could force traffic onto the nuclear control systems, further confusing the issue.

#### **No checks on escalation.**

MacDonald 18. Bruce W. MacDonald, professor at the Johns Hopkins University School of Advanced International Studies (SAIS), ("Outer Space; Earthly Escalation? Chinese Perspectives on Space Operations and Escalation," August 2018, *NSI* white paper, <https://nsiteam.com/social/wp-content/uploads/2018/08/SMA-White-Paper_Chinese-Persepectives-on-Space_-Aug-2018.pdf>, accessed 7-14-2019) bm

Challenges across all five phases: Another escalation threat is the inexperience that nations share in the space and cyber domains, unlike in conventional domains of conflict and in the nuclear domain to a lesser extent. This inexperience gives rise to a “sorcerer’s apprentice” problem, placing leaders at risk of making potentially unwise judgment calls without a full grasp of their implications. The space and cyber domains are sufficiently new and dynamic that such decisions are highly likely. Adding to this uncertainty is the ever-growing interdependence of infrastructures within and among advanced countries, making the impact of major attacks against a country’s space and/or cyber infrastructures inherently unknowable. In considering all these factors, it is important to keep in mind that events in space do not happen in isolation. Any space conflict would likely be part of a multidimensional field of play, with space being important because of the effects it has on the earth. Significant instability in space is unlikely to lead to war if there is stability in other domains and in the larger geopolitical relationship between participants, while conflict could easily spread to a stable space domain if war in other domains appeared preferable to the alternative. While any use of nuclear weapons would pose a serious threat of escalation to full-scale nuclear war, any use of space or cyber offense would not pose a comparable escalation threat. That said, a series of reciprocal escalations could easily become unstable. No clear-cut escalation barrier exists in the space and cyber domains, and given the short-term tactical benefits of escalating ahead of an adversary, each additional escalation could create incentives for further escalation that an adversary would not always anticipate. Escalation in space, then, is a slippery slope with few off-ramps.

#### No limited nuclear wars – extinction.

Webber 19 – Dr Philip Webber has written widely on nuclear issues and is Chair of Scientists for Global Responsibility (SGR) – a membership organisation promoting responsible science and technology. We will all end up killing each other and one nuclear blast could do it. 5/18/19. [METRO.UK “We will all end up killing each other and one nuclear blast could do it,” <https://metro.co.uk/2019/05/18/we-will-all-end-up-killing-each-other-and-one-nuclear-blast-could-do-it-9370115/>] Recut Justin

The nuclear armed nations have inadvertently created a global Doomsday machine, built with 15,000 nuclear weapons.

Most (93%) have been built by Russia and in the US, 3,100 of them are ready to fire within hours.

Pre-programmed targets include main cities as well as a range of military and civilian targets across the world primarily in the UK, Europe, US, Russia and China but also in Japan, Australia and South America.

One nuclear blast, one mistake, one cyber attack could trigger it.

But first a reminder about the incredible destructive power of a nuclear weapon. Modern nuclear warheads are typically 20 times larger than either of the two bombs that obliterated Hiroshima and Nagasaki at the end of the Second World War. What just one nuclear warhead can do is unimaginable. We’ve drawn some of the key features to scale against cityscapes in the UK for a Russian SS-18 RS 20V (NATO designation ‘Satan’) 500kT warhead. US submarines deploy a similar weapon – the Trident II Mk5, 475kT warhead. A deafening, terrifying noise will be created, like an intense thunder that lasts for 10 seconds or longer.

After a blinding flash of light bright destroying the retina of anyone looking, and a violent electromagnetic pulse (EMP) knocking out electrical equipment several miles away, a bomb of this size quickly forms an incandescent fireball 850 metres across.

This is about the same height as the world’s tallest building, the Burj Khalifa. Drawn against the London Canary Wharf financial district or the Manchester skyline, the huge fireball dwarfs one Canary Sq. (240m), the South Tower Deansgate (201m) and the Beetham Tower Hilton, (170m). The fireball engulfs both city centres completely, melting glass and steel and forms an intensely radioactive 60m deep crater zone of molten earth and debris. A devastating supersonic blast wave flattens everything within a radius of two to three km, the entire Manchester centre, an area larger than the City of London, with lighter damage out to eight km. Most people in these areas would be killed or very seriously injured.

The fireball quickly rises forming an enormous characteristic mushroom shaped cloud raining highly radioactive particles (fallout). It rises to 60,000 ft (18,000m) – twice the altitude of Everest – and is 15 miles, 24km across.

This is one warhead. There are 10 such warheads on each of Russia’s 46 missiles (460 in total) and 48 on each of eight US Trident submarines (384 in total). In reality, in a nuclear conflict all of these warheads and a further 956 ready-to-fire are likely to be launched.

Whilst this scale of destruction is horrific and hundreds of millions of people would be killed in a few hours from a combination of blast, radiation and huge fires, there are also terrible longer-term effects.

Scientists predict that huge city-wide firestorms combined with very the high-altitude debris clouds would severely reduce sunlight levels and disrupt the world’s climate for a decade causing drought, a prolonged winter, global famine and catastrophic impacts for all life on earth and in the seas due to intense levels of UV with the destruction of the ozone layer.

But even at the level of a few hundred nuclear warheads, the consequences of a nuclear war would be extremely severe across the world far beyond the areas hit directly. A nuclear conflict between India and Pakistan with ‘only’ 100 small warheads would kill hundreds of millions and cause climate damage leading to a global famine. The sheer destructive nature of nuclear explosions combined with long lasting radiation, means that nuclear weapons are of no military use. ‘Enemy’ territory would be unusable for years because of intense radiation – especially when nuclear power stations and reprocessing plants are hit.

Even if your own country is not hit, radiation and climate damage will spread across the globe. No one escapes the consequences.

But the nuclear nations argue that they build and keep nuclear weapons to make sure that they are never used. After all no one would be stupid enough to actually launch a nuclear weapon facing such terrible retaliation? It sounds obvious. If you threaten any attacker with terrible nuclear devastation of course they won’t attack you. That might be true most of the time. It is very unlikely that any country would launch a nuclear attack deliberately. But there are two very major problems. First, a terrorist organisation with a nuclear weapon cannot be deterred in this way. Secondly, there are several ways in which a nuclear war can start by mistake. A report by the prestigious Chatham House in 2014 documents 30 instances between 1962 and 2002 when nuclear weapons came within minutes of being launched due to miscalculation, miscommunication, or technical errors. What prevented their use on many of these occasions was the intervention of individuals who, against military orders, either refused to authorise a nuclear strike or relay information that would have led to launch. Examples include a weather rocket launch mistaken for an attack on Russia, a US satellite misinterpreting sunlight reflecting off clouds as multiple missiles firings, a 42c chip fault creating a false warning of 220 missiles launched at the United States. Such risks are heightened during political crises.

The risk of mistake is very high because, in a hangover from the Cold War, the USA and Russia each keep 900 warheads ready to fire in a few minutes, in a ‘launch on warning’ status, should a warning of nuclear attack come in.

These nuclear weapons form a dangerous nuclear stand-off – rather like two people holding guns to each other’s heads.

With only a few minutes to evaluate a warning of nuclear attack before warheads would strike, one mistake can trigger disaster. A similar nuclear stand-off exists between India and Pakistan.

#### Satellites revolutionize acidification response.

Newton 20 – A freelance writer originally hailing from England, he moved to Berlin in 2012 and hasn’t looked back. Prior to this, he gained a MScEcon in Strategic Studies from Aberystywth, specialising in information strategy and military-media relations. He also finds it awkward to write about himself in the third person. 8/12/20. [Reset, “Satellite Technology Could Hold the Key to Measuring the Ocean’s Increasing Acidification,” <https://en.reset.org/satellite-technology-could-hold-key-measuring-oceans-increasing-acidification-08112020/>] Justin

Advanced satellite technology has the potential to revolutionise the way we see our planet. Satellites equipped with high-tech camera equipment can provide never-seen-before views of Earth and allow researchers to observe vast areas in an instant. Combine this with machine learning algorithms and we’re able to track and discover information about challenging environmental issues – such as deforestation or plastic pollution – using satellite photography.

And some satellites are able to go even further than that. Using specialised camera equipment, satellites can now also be used to measure things generally invisible to the human eye, such as air and sea pollution.

For example, the European Space Agency’s Sentinel-5P satellite, which was launched in 2017, has an advanced suite of tools which can be used to measure various pollutants in the Earth’s atmosphere. Of particular note is the Tropomi (TROPOspheric Monitoring Instrument), a spectrometer capable of scanning the Earth’s atmosphere through ultraviolet (UV), visible (VIS), near (NIR) and short-wavelength infrared (SWIR) spectrums. By detecting fluctuations in these various wave-lengths, the satellite can detect the presence of compounds such as sulphur dioxide and nitrogen dioxide.

However, air pollution isn’t limited to our atmosphere – it’s increasingly making its way into our seas and oceans, where it’s absorbed by seawater and causes ocean acidification.

Examining Our Oceans From Space

Both NASA and ESA are exploring the issue of measuring ocean acidification from space, with their Soil Moisture and Ocean Salinity (SMOS) and Aquarius programmes respectively. The Earth’s oceans have been instrumental in containing climate change, as they can absorb vast amounts of carbon, reducing the global temperature. But, this effect takes its toll. In recent years the ocean’s chemical balance has been shifting with seawater becoming less alkaline and more acidic.

This process has the potential to greatly affect the biodiversity of the ocean, especially in regards to smaller creatures such as pteropods. Increased ocean acidification can act to disrupt the growth of pteropods’ shells, affecting their chances of survival. This is especially important as pteropods form the basis of many ocean food chains.

New research has recently been concluded which looked into the feasibility of measuring ocean acidification from space. Although satellites would be unable to measure the ocean’s pH level – the clearest indication of ocean acidification – it can measure ocean salinity, the amount of salt in the seawater.

For example, NASA’s Aquarius satellite is equipped with devices which can detect and measure the microwaves by blackbody radiation coming from the ocean’s surface. With this information, it can estimate the salinity of the top 2 centimetres of the ocean’s surface. It is possible this information can then be extrapolated and combined with carbon measurements to come to an accurate prediction of ocean acidification. A large international team headed up by the Plymouth Marine Laboratory is currently looking into the feasibility of this model. The project’s lead, Dr Peter Land told RESET:

“The main advantage satellites confer is regular coverage of the entire globe, giving us a far more detailed, synoptic view than is possible with in situ data, especially in regions that are hard to access. The main challenge is whether satellite measurements can estimate ocean acidification parameters with sufficient accuracy to be useful. In this respect, satellites have had a big boost in the last few years with the advent of satellites that measure salinity.”

Are Satellites Up to the Task?

If satellites can perform this role, it could greatly increase the efficiency of ocean acidification studies as well as decrease their costs. Plymouth Laboratory’s Helen Findlay explained that, previously, ocean acidification was measured in situ from ships or moorings which could take water samples and return them to a lab for analysis.

#### Extinction – empirics.

Carrington 19 – Damian is an Environmental Editor for the Guardian. 10/21/19. [Guardian, “Ocean acidification can cause mass extinctions, fossils reveal,” <https://www.theguardian.com/environment/2019/oct/21/ocean-acidification-can-cause-mass-extinctions-fossils-reveal#:~:text=Ocean%20acidification%20can%20cause%20the,66m%20years%20ago%20has%20revealed.&text=This%20spike%20demonstrated%20it%20was,chalky%20shells%20of%20many%20species>.] Justin

Ocean acidification can cause the mass extinction of marine life, fossil evidence from 66m years ago has revealed.

A key impact of today’s climate crisis is that seas are again getting more acidic, as they absorb carbon emissions from the burning of coal, oil and gas. Scientists said the latest research is a warning that humanity is risking potential “ecological collapse” in the oceans, which produce half the oxygen we breathe.

The researchers analysed small seashells in sediment laid down shortly after a giant meteorite hit the Earth, wiping out the dinosaurs and three-quarters of marine species. Chemical analysis of the shells showed a sharp drop in the pH of the ocean in the century to the millennium after the strike.

This spike demonstrated it was the meteorite impact that made the ocean more acidic, effectively dissolving the chalky shells of many species. Large-scale volcanic activity was also considered a possible culprit, but this occurred over a much longer period.

The oceans acidified because the meteorite impact vaporised rocks containing sulphates and carbonates, causing sulphuric acid and carbonic acid to rain down. The mass die-off of plants on land after the strike also increased CO2 in the atmosphere.

“We show ocean acidification can precipitate ecological collapse,” said Michael Henehan at the GFZ German research centre for geosciences in Potsdam, who led the study. “Before we had the idea, but we did not have the empirical proof.”

The researchers found that the pH dropped by 0.25 pH units in the 100-1,000 years after the strike. It is possible that there was an even bigger drop in pH in the decade or two after the strike and the scientists are examining other sediments in even finer detail.

Henehan said: “If 0.25 was enough to precipitate a mass extinction, we should be worried.” Researchers estimate that the pH of the ocean will drop by 0.4 pH units by the end of this century if carbon emissions are not stopped, or by 0.15 units if global temperature rise is limited to 2C.

Henehan said: “We may think of [acidification] as something to worry about for our grandchildren. But if it truly does get to the same acidification as at the [meteorite strike] boundary, then you are talking about effects that will last for the lifetime of our species. It was hundreds of thousands of years before carbon cycling returned to normal.”

The research, published in the journal Proceedings of the National Academy of Sciences, analysed sediments that Henehan encountered by chance, during a conference field trip in the Netherlands. The sediments, which straddle the moment of the impact, lie in caves that were used by people hiding from the Nazis during the second world war. “It was so lucky,” said Henehan.

The rocks contained foraminifera, small-shelled marine organisms. “In the boundary clay, we managed to capture them just limping on past the asteroid impact. But you can see their shell walls were much thinner and poorly calcified after the impact,” he said.

It was the knock-on effects of acidification and other stresses, such as the “nuclear winter” that followed the impact, that finally drove these foraminifera to extinction, he said: “You have the complete breakdown of the whole food chain.” He said oceans also faced additional stresses today, from global heating to widespread pollution, overfishing and invasive alien species.

Phil Williamson, at the University of East Anglia, who was not involved in the research, said: “It is relatively easy to identify mass extinction events in the fossil record, but much harder to know exactly what caused them. Evidence for the role of ocean acidification has generally been weak, until now.”

He said caution was needed in making the comparison between the acidification spike 66m years ago and today: “When the asteroid struck, atmospheric CO2 was naturally already much higher than today, and the pH much lower. Furthermore, large asteroid impacts cause prolonged darkness.”

Williamson added: “Nevertheless, this study provides further warning that the global changes in ocean chemistry that we are currently driving have the potential to cause highly undesirable and effectively irreversible damage to ocean biology.”

Henehan said the generally lower ocean pH 66m years ago might have made shelled organisms more resilient to acidification. “Who knows if our current [marine] system is as well set up to cope with sudden acidification?”

### 1AC – Framing

#### The standard is maximizing expected well-being – to clarify, saving lives

#### 1] Death is bad and o/w—ontologically destroys the subject.

Paterson 1 – Department of Philosophy, Providence College, Rhode Island. (Craig, “A Life Not Worth Living?”, Studies in Christian Ethics, <http://sce.sagepub.com>)

Contrary to those accounts, I would argue that it is death per se that is really the objective evil for us, not because it deprives us of a prospective future of overall good judged better than the alter- native of non-being. It cannot be about harm to a former person who has ceased to exist, for no person actually suffers from the sub-sequent non-participation. Rather, death in itself is an evil to us because it ontologically destroys the current existent subject — it is the ultimate in metaphysical lightening strikes.80 The evil of death is truly an ontological evil borne by the person who already exists, independently of calculations about better or worse possible lives. Such an evil need not be consciously experienced in order to be an evil for the kind of being a human person is. Death is an evil because of the change in kind it brings about, a change that is destructive of the type of entity that we essentially are. Anything, whether caused naturally or caused by human intervention (intentional or unintentional) that drastically interferes in the process of maintaining the person in existence is an objective evil for the person. What is crucially at stake here, and is dialectically supportive of the self-evidency of the basic good of human life, is that death is a radical interference with the current life process of the kind of being that we are. In consequence, death itself can be credibly thought of as a ‘primitive evil’ for all persons, regardless of the extent to which they are currently or prospectively capable of participating in a full array of the goods of life.81  In conclusion, concerning willed human actions, it is justifiable to state that any intentional rejection of human life itself cannot therefore be warranted since it is an expression of an ultimate disvalue for the subject, namely, the destruction of the present person; a radical ontological good that we cannot begin to weigh objectively against the travails of life in a rational manner. To deal with the sources of disvalue (pain, suffering, etc.) we should not seek to irrationally destroy the person, the very source and condition of all human possibility.82

#### 2] Comes before value-to-life.

Tännsjö 11 (Torbjörn, the Kristian Claëson Professor of Practical Philosophy at Stockholm University, “Shalt Thou Sometimes Murder? On the Ethics of Killing,” <http://people.su.se/~jolso/HS-texter/shaltthou.pdf>) //BS 1-27-2018

\*\*Bracketed to avoid triggers

I suppose it is correct to say that, if Schopenhauer is right, if life is never worth living, then according to utilitarianism we should all [die] commit suicide and put an end to humanity. But this does not mean that, each of us should commit suicide. I commented on this in chapter two when I presented the idea that utilitarianism should be applied, not only to individual actions, but to collective actions as well.¶ It is a well-known fact that people rarely commit suicide. Some even claim that no one who is mentally sound commits suicide. Could that be taken as evidence for the claim that people live lives worth living? That would be rash. Many people are not utilitarians. They may avoid suicide because they believe that it is morally wrong to kill oneself. It is also a possibility that, even if people lead lives not worth living, they believe they do. And even if some may believe that their lives, up to now, have not been worth living, their future lives will be better. They may be mistaken about this. They may hold false expectations about the future.¶ From the point of view of evolutionary biology, it is natural to assume that people should rarely commit suicide. If we set old age to one side, it has poor survival value (of one’s genes) to kill oneself. So it should be expected that it is difficult for ordinary people to kill themselves. But then theories about cognitive dissonance, known from psychology, should warn us that we may come to believe that we live better lives than we do.¶ My strong belief is that most of us live lives worth living. However, I do believe that our lives are close to the point where they stop being worth living. But then it is at least not very far-fetched to think that they may be worth not living, after all. My assessment may be too optimistic.¶ Let us just for the sake of the argument assume that our lives are not worth living, and let us accept that, if this is so, we should all kill ourselves. As I noted above, this does not answer the question what we should do, each one of us. My conjecture is that we should not [die] commit suicide. The explanation is simple. If I [die] kill myself, many people will suffer. Here is a rough explanation of how this will happen: ¶ ... suicide “survivors” confront a complex array of feelings. Various forms of guilt are quite common, such as that arising from (a) the belief that one contributed to the suicidal person's anguish, or (b) the failure to recognize that anguish, or (c) the inability to prevent the suicidal act itself. Suicide also leads to rage, loneliness, and awareness of vulnerability in those left behind. Indeed, the sense that suicide is an essentially selfish act dominates many popular perceptions of suicide. ¶ The fact that all our lives lack meaning, if they do, does not mean that others will follow my example. They will go on with their lives and their false expectations — at least for a while devastated because of my suicide. But then I have an obligation, for their sake, to go on with my life. It is highly likely that, by committing suicide, I create more suffering (in their lives) than I avoid (in my life).

#### 3] Extinction mathematically outweighs.

MacAskill 14 [William, Oxford Philosopher and youngest tenured philosopher in the world, Normative Uncertainty, 2014]

The human race might go extinct from a number of causes: asteroids, supervolcanoes, runaway climate change, pandemics, nuclear war, and the development and use of dangerous new technologies such as synthetic biology, all pose risks (even if very small) to the continued survival of the human race.184 And different moral views give opposing answers to question of whether this would be a good or a bad thing. It might seem obvious that human extinction would be a very bad thing, both because of the loss of potential future lives, and because of the loss of the scientific and artistic progress that we would make in the future. But the issue is at least unclear. The continuation of the human race would be a mixed bag: inevitably, it would involve both upsides and downsides. And if one regards it as much more important to avoid bad things happening than to promote good things happening then one could plausibly regard human extinction as a good thing.For example, one might regard the prevention of bads as being in general more important that the promotion of goods, as defended historically by G. E. Moore,185 and more recently by Thomas Hurka.186 One could weight the prevention of suffering as being much more important that the promotion of happiness. Or one could weight the prevention of objective bads, such as war and genocide, as being much more important than the promotion of objective goods, such as scientific and artistic progress. If the human race continues its future will inevitably involve suffering as well as happiness, and objective bads as well as objective goods. So, if one weights the bads sufficiently heavily against the goods, or if one is sufficiently pessimistic about humanity’s ability to achieve good outcomes, then one will regard human extinction as a good thing.187 However, even if we believe in a moral view according to which human extinction would be a good thing, we still have strong reason to prevent near-term human extinction. To see this, we must note three points. First, we should note that the extinction of the human race is an extremely high stakes moral issue. Humanity could be around for a very long time: if humans survive as long as the median mammal species, we will last another two million years. On this estimate, the number of humans in existence in the The future, given that we don’t go extinct any time soon, would be 2×10^14. So if it is good to bring new people into existence, then it’s very good to prevent human extinction. Second, human extinction is by its nature an irreversible scenario. If we continue to exist, then we always have the option of letting ourselves go extinct in the future (or, perhaps more realistically, of considerably reducing population size). But if we go extinct, then we can’t magically bring ourselves back into existence at a later date. Third, we should expect ourselves to progress, morally, over the next few centuries, as we have progressed in the past. So we should expect that in a few centuries’ time we will have better evidence about how to evaluate human extinction than we currently have. Given these three factors, it would be better to prevent the near-term extinction of the human race, even if we thought that the extinction of the human race would actually be a very good thing. To make this concrete, I’ll give the following simple but illustrative model. Suppose that we have 0.8 credence that it is a bad thing to produce new people, and 0.2 certain that it’s a good thing to produce new people; and the degree to which it is good to produce new people, if it is good, is the same as the degree to which it is bad to produce new people, if it is bad. That is, I’m supposing, for simplicity, that we know that one new life has one unit of value; we just don’t know whether that unit is positive or negative. And let’s use our estimate of 2×10^14 people who would exist in the future, if we avoid near-term human extinction. Given our stipulated credences, the expected benefit of letting the human race go extinct now would be (.8-.2)×(2×10^14) = 1.2×(10^14). Suppose that, if we let the human race continue and did research for 300 years, we would know for certain whether or not additional people are of positive or negative value. If so, then with the credences above we should think it 80% likely that we will find out that it is a bad thing to produce new people, and 20% likely that we will find out that it’s a good thing to produce new people. So there’s an 80% chance of a loss of 3×(10^10) (because of the delay of letting the human race go extinct), the expected value of which is 2.4×(10^10). But there’s also a 20% chance of a gain of 2×(10^14), the expected value of which is 4×(10^13). That is, in expected value terms, the cost of waiting for a few hundred years is vanishingly small compared with the benefit of keeping one’s options open while one gains new information.

#### Structural violence – death causes suffering cause people can’t get access to resources and basic necessities

#### 4] Apocalyptic images challenge power structures to create futures of social justice

Jessica Hurley 17, Assistant Professor in the Humanities at the University of Chicago, “Impossible Futures: Fictions of Risk in the Longue Durée”, Duke University Press, https://read.dukeupress.edu/american-literature/article/89/4/761/132823/Impossible-Futures-Fictions-of-Risk-in-the-Longue

If contemporary ecocriticism has a shared premise about environmental risk it is that genre is the key to both perceiving and, possibly, correcting ecological crisis. Frederick Buell’s 2003 From Apocalypse to Way of Life: Environmental Crisis in the American Century has established one of the most central oppositions of this paradigm. As his title suggests, Buell tells the story of a discourse that began in the apocalyptic mode in the 1960s and 70s, when discussions of “the immanent end of nature” most commonly took the form of “prophecy, revelation, climax, and extermination” before turning away from apocalypse when the prophesied ends failed to arrive (112, 78). Buell offers his suggestion for the appropriate literary mode for life lived within a crisis that is both unceasing and inescapable: new voices, “if wise enough….will abandon apocalypse for a sadder realism that looks closely at social and environmental changes in process and recognizes crisis as a place where people dwell” (202-3). In a world of threat, Buell demands a realism that might help us see risks more clearly and aid our survival.¶ Buell’s argument has become a broadly held view in contemporary risk theory and ecocriticism, overlapping fields in the social sciences and humanities that address the foundational question of second modernity: “how do you live when you are at such risk?” (Woodward 2009, 205).1 Such an assertion, however, assumes both that realism is a neutral descriptive practice and that apocalypse is not something that is happening now in places that we might not see, or cannot hear. This essay argues for the continuing importance of apocalyptic narrative forms in representations of environmental risk to disrupt conservative realisms that maintain the status quo. Taking the ecological disaster of nuclear waste as my case study, I examine two fictional treatments of nuclear waste dumps that create different temporal structures within which the colonial history of the United States plays out. The first, a set of Department of Energy documents that use statistical modeling and fictional description to predict a set of realistic futures for the site of the Waste Isolation Pilot Plant in New Mexico (1991), creates a present that is fully knowable and a future that is fully predictable. Such an approach, I suggest, perpetuates the state logics of implausibility that have long undergirded settler colonialism in the United States. In contrast, Leslie Marmon Silko’s contemporaneous novel Almanac of the Dead (1991) uses its apocalyptic form to deconstruct the claims to verisimilitude that undergird state realism, transforming nuclear waste into a prophecy of the end of the United States rather than a means for imagining its continuation. In Almanac of the Dead, the presence of nuclear waste introjects a deep-time perspective into contemporary America, transforming the present into a speculative space where environmental catastrophe produces not only unevenly distributed damage but also revolutionary forms of social justice that insist on a truth that probability modeling cannot contain: that the future will be unimaginably different from the present, while the present, too, might yet be utterly different from the real that we think we know.¶ Nuclear waste is rarely treated in ecocriticism or risk theory, for several reasons: it is too manmade to be ecological; its catastrophes are ongoing, intentionally produced situations rather than sudden disasters; and it does not support the narrative that subtends ecocritical accounts of risk perception in which the nuclear threat gives rise to an awareness of other kinds of threat before reaching the end of its relevance at the end of the Cold War.2 In what follows, I argue that the failure of nuclear waste to fit into the critical frames created by ecocriticism and risk theory to date offers an opportunity to expand those frames and overcome some of their limitations, especially the impulse towards a paranoid, totalizing realism that Peter van Wyck (2005) has described as central to ecocriticism in the risk society. Nuclear waste has durational forms that dwarf the human. It therefore dwells less in the economy of risk as it is currently conceptualized and more in the blown-out realm of deep time. Inhabiting the temporal scale that has recently been christened the Anthropocene, the geological era defined by the impact of human activities on the world’s geology and climate, nuclear waste unsettles any attempt at realist description, unveiling the limits of human imagination at every turn.3 By analyzing risk society through a heuristic of nuclear waste, this essay offers a critique of nuclear colonialism and environmental racism. At the same time, it shows how the apocalyptic mode in deep time allows narratives of environmental harm and danger to move beyond the paranoid logic of risk. In the world of deep time, all that might come to pass will come to pass, sooner or later. The endless maybes of risk become certainties. The impossibilities of our own deaths and the deaths of everything else will come. But so too will other impossibilities: talking macaws and alien visitors; the end of the colonial occupation of North America, perhaps, or a sudden human determination to let the world live. The end of capitalism may yet become more thinkable than the end of the world. Just wait long enough. Stranger things will happen.¶

#### 5] Envisioning existential threats and potential solutions within debate iteratively fractures settler colonialism.

--CHN = Council of the Haida Nation, government of the peoples of the Haida Gwaii, an archipelago claimed by Canada

--FYI about the Haida People / Council of the Haida Nation: used courts, human blockades to prevent logging in the forests of “Haida Gwaii,” other progressive approaches => winning support of Canadian citizens, government officials, and judges, eventually led to the Supreme Court of Canada recognizing their absolute title to their land---along the way explicitly rejected violent action

Joseph J. Z. Weiss 15. Ph.D. candidate, Anthropology, University of Chicago. December 2015. “Unsettling Futures: Haida Future-Making, Politics and Mobility in the Settler Colonial Present.” p.216-232, https://knowledge.uchicago.edu/bitstream/handle/11417/1121/Weiss\_uchicago\_0330D\_13139.pdf?sequence=1&isAllowed=y

Conclusion: “What’s next? Just guess.” Signs of the Future One of the more recent additions to the socio-landscape of Old Massett, which I noticed on a return visit in 2014, was a series of blue signs that had appeared in many of the lawns on reserve and a good few uptown. The sign was a good two feet high and emblazoned with capitalized text: UNITED AGAINST ENBRIDGE. Below the text was a picture of a salmon. The salmon and the first word, “UNITED,” were in stark, attention-grabbing white, while the other text was in black. The signs, I later discovered, were distributed for five dollars each by the “Friends of Wild Salmon,” a coalition of northern British Columbia residents – including both First Nations and non-First Nations members – working together to oppose the Enbridge Gateway Pipeline Project.1 Perhaps appropriately, then, I noticed the sign on the lawns of both Haida and non-Haida, in Old Massett, (New) Masset, and out by Towtown. The signs may have been new, but their message is one that should have become familiar to us at this point: The people of Haida Gwaii oppose “Enbridge;” that is, The Enbridge Northern Gateway Pipelines Project. The project, first proposed in the mid-2000s, seeks to construct two pipelines to transport crude oil and condensate from northern Alberta to Kitimat on the coast of British Columbia.2 The oil would then be transported via “super-tanker” from the coast, through the Hecate Straight that passes between the west coast and the islands of Haida Gwaii before being exported to other nations (particularly China). Enbridge has received heavy support for the project from Canada’s current Conservative government, headed by Prime Minister Stephen Harper, and in 2013 the Enbridge Joint-Review Panel – despite the words of hippies and Haida alike, alongside fierce opposition from all over the northwest coast - approved the pipelines, albeit with 209 required conditions.3 As a partnership between Canadian federal and corporate interests, the Enbridge Pipelines Project promises a future horizon of economic prosperity, one that unequivocally justifies any environmental risk in the present. On Haida Gwaii, Enbridge presages a rather different future, one in which the unpredictable waters of the Hecade Straight all but guarantee a tanker spill. Such a spill would devastate the waters and lands of the islands and the neighbouring coastline of British Columbia, destroying the fish and poisoning the plants that currently draw on ocean waters and the animals that feed thereon. Neither eagles nor ravens could survive, living as they do on a diet that consists primarily of marine life, a fact which all but guarantees the disappearance of Eagles and Ravens, the Haida people whose lifeways as such are so fundamentally tied to the islands of Haida Gwaii. Haida Gwaii could no longer be home. A song recorded in protest again Enbridge by Aboriginal artist Kinnie Starr and animated as a music video by Haidawood, a team of Haida and non-Haida stop-motion artists and animators, makes this threat explicit, asking in its opening lines “Who will save these waters, save them for our great granddaughters, save them for our great grand-daughter’s sons, […] save them before all is dead and gone?”4 This nightmare future, this future that is no future, is one that looms large over the whole of this dissertation. It is familiar because it is a reiteration of the horror of ecological cataclysm that the CHN formed itself in opposition against, that the “hippies” risk metonymically bringing about by taking from the lands and waters without respect. But it is also familiar because in a broader sense it is the future that settler colonialism attempted to give to Native peoples; indeed, to render as their already given destiny. This is the future of indigenous erasure, of ultimate disappearance, of a closed temporality which can only end in “all dead and gone.” As I have also hopefully shown in each of my chapters, however, the future of “no future” is never taken as inevitable or already determined by Haida people. The work of future-making instead always acts to ward off the nightmare future of Haida erasure, always puts in its place instead multiple possible futures in which Haida people continue. Take the blue signs on the lawns of the Masset(t)s, Old and New, implicitly answering Kinnie Starr’s question with the bold declaration that the islands (will) stand “UNITED” against Enbridge. But the social significances of these futures are never encompassed solely by the ways in which they respond to the threat of nightmare futures. As we saw in Chapter 3, for instance, the production of a future of Haida and non-Haida unity is considerably more complicated than the declaration of shared solidarity, speaking back to a particular history of Haida and settler relations and fantasy schemas, looking forward towards finding productive ways in which non-Haida can be integrated into Haida systems of sociality and responsibility. To speak of a future united against Enbridge is thus necessarily to speak of many other things, just as it is the case when speaking of a future of Haida return, a future of care-full leadership, or a future of traditional authority. Larger social worlds unfold out of the constitution of particular futures. This is why, more than anything, I want to make clear in the final, concluding chapter of this dissertation that the political (if not the existential) significance of Haida future-making does not lie simply in the specific ways in which individual futures respond to particular dilemmas of the settler colonial present. Rather, what is most crucial about future-making as a way of thinking out from within the temporal brackets of settler colonialism’s deferred erasure is simply the fact of future-making itself. What matters the most is the capacity to say, as Haida rapper Ja$e ElNino does in a guest appearance in Starr’s song, “Now expect the best from the northwest/ What’s next? Just guess.” ElNino asserts the openness of the future, challenging his listeners to even attempt to predict the field of possibilities still to come. This does not mean, though, that this openness is unmoored. Quite the opposite, ElNino asks us to “expect the best of the northwest,” in response to the threat of Enbridge and, I think, more generally. In this spirit, in what follows I highlight the significance of location to indigenous futurity, exploring how Old Massett, its neighbouring communities along Masset Inlet, and the lands and waters of Haida Gwaii act as locations around which the very openness of Haida futures can be articulated. My discussion will be largely synthetic, reading together my previous chapters to attempt to arrive at a few conclusions for this dissertation at a whole. I begin with a discussion of Haida Gwaii, once again, as “home,” asking what it means to consider the islands as a Haida homeland (and one that requires “care” as such) in the light of the futures I have sketched out. I then draw on this to pose a few suggestions for the political anthropology of indigenous peoples and its abiding contemporary concern with sovereign rights and territoriality. Finally, I conclude by drawing out the multiple meanings of my titular phrase, “unsettling futures,” in the context of Haida futuremaking. Homeland Haida Gwaii is in at least some sense at the center of each of the futures I have discussed in this dissertation. It is the home to which Haida are expected (and expect) to return, the “cornucopia” of off-the-grid fantasy, the ongoing historical space of complex social and material relations that these fantasies elide, the perpetually at risk ecological landscape which demands (and authorizes) the CHN’s care and respect. And, as we have seen, these various futures for the islands are not isolated from one another. Quite the opposite, futures proliferate in response to each other. The potential for non-Haida homing necessitates strategic forms of future-oriented social integration to bring these new arrivals into respectful relations with the Haida world, the nightmare non-future of ecological collapse is warded off by the attempt to constitute care-full futures under Haida control. What all these Haida futures have in common – at least as they relate to the islands - is that they work to preserve Haida Gwaii, and the community of Old Massett in particular, as spaces in which Haida futures remain possible. This fact, as I have already begun to suggest in Chapter 2, might help us to resolve some of James Clifford’s dilemmas in relation to indigenous mobility. As I pointed towards then, the notion that “place” is significant to indigenous peoples – politically, socially, affectively, culturally – has become one of the essential components of how “indigeneity” is understood as a global phenomenon and a strategic identity from which rights claims can be advanced. Take Article 25 of the Universal Declaration of the Rights of Indigenous Peoples: Indigenous peoples have the right to maintain and strengthen their *distinctive spiritual relationship* with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard (Assembly 2007:10, emphasis mine). But what precisely does it mean to have a “distinctive, spiritual relationship” to a place, and who determines what might constitute that relationship? Here one of the perils of Povinelli’s “cunning of recognition,” as indigenous rights to territory become conflated with - and evaluated against - essentialized settler notions of Native ecological spirituality and/or emplacedness (cf: Raibmon 2005; Nadasdy 2003). If indigeneity thereby takes on the significance of being “rooted” in a particular place, of having certain identifiably “distinctive” cultural relationships to that place that others might lack, then the fact of indigenous mobility would indeed pose a profound dilemma for the category of indigeneity on the one hand and the capacity to make claims to territorial rights *qua* one’s indigeneity on the other. But there is a remarkable temporal shallowness to all this. To give a representative example, the Australian state criteria for what constitutes “cultural rights to territory” that Povinelli interrogates function solely in the past and the present, mandating that Aboriginal people show continuity of occupation and of the cultural practices associated with “Aboriginal occupation” in the mind of the court in order to be recognized as possessing a rightful claim to their home territories (Povinelli 2002). Erased in this is the possibility that a territory could be the site of departure and return, that it could have a future horizon that is flexible, subject to transformation alongside the transformations of the people(s) who call it home, without thereby necessarily losing its integrity as a rightful space of indigenous occupation. Such a possibility is not controversial for my Haida interlocutors. Rather, it has the status of an already-given certainty, community common sense - though there is without doubt much social work that goes into the production of that certainty. What makes indigenous mobility fraught, then, might have rather more to do with the constitution of settler polities than it does with the actual practices of indigenous peoples. Consider the various ways in which we have already seen colonial authorities attempt to control Haida movement, from the forced expulsions of 19th century Victoria to the removal of Haida children from the islands for residential schools less than a century later. Consider too the manufacture of the reserves themselves, the fixing of two Haida “Bands” with their own federally determined territories, beyond which Haida people could claim no rights over land, waters, or resources (cf: Harris 2002). This is a logic of containment, of isolation. In leaving their assigned spaces, Native peoples were assumed by colonial authorities to be leaving the space of their Nativeness behind, assimilating into settler society on its terms. Indeed, this was the motivating logic of the residential schools program, which took as its premise the idea that “Indians” could always “backslide” into “savage customs” as long as they remained in their homes and with their families. Aboriginal children thus had to be brought somewhere else to learn how to join “civilized,” that is, white Christian, society (Miller 1996). Reserves could thus be rendered as the last bastions of a “weird and waning race,” to quote Scott, their inhabitants temporally foreclosed and spatially fixed. The notion that indigenous people could move without ceasing to be (or ceasing to fight for their rights to self-determination and Title to their lands) unsettles this narrative, just as does the intertwined possibility of indigenous futurity. The relationship to Haida Gwaii that we’ve seen sketched out by the Haida futures explored in this dissertation does not preclude the possibility of “distinctive spiritual relationships” between Haida and their home territories. Quite the opposite, the ineffable quality of homing alone suggests that many of my interlocutors feel a connection to their home that goes beyond the kinds of practices that are only possible on the islands, their beauty or their history. Indeed, when considered as home, when considered as a site that requires care, there is little doubt that Haida Gwaii can encompass a wide range of phenomenological, affective, social, and cultural ways of relating to its lands and waters by Haida people (and their neighbours, at times for good, at times for ill). But it is not these relations as such that encompass the totality of Haida Gwaii’s significance. Rather, what is of greatest concern to my interlocutors is the continuing future possibility that relations like that *could be* formed, that people *could continue* to be called home to Haida Gwaii once they’ve fully explored the world off-island, that the qualities that precisely *make* Haida Gwaii home *could* be preserved. This is what it means, I think, to “take care” of Haida Gwaii, to allow it to continue as a homeland for uncounted future generations. Though they certainly emphasize the need for Haida Gwaii to be maintained as a location for Haida futurity, this does not mean that the futures we have seen expend all the possible ways in which such future forms of Haida social, material, ecological, and relational life could be formed. Recall Ja$e ElNino’s challenge of a future so open that its possible contents can only be guessed at. What Haida future-making demonstrates is that there are a set of potentialities which are worth protecting so that Haida people can continue to access them, to come home to them, even as continuing forms of mobility and political processes can also shape and reshape Haida social and cultural life on and off the islands. Homeland is not a regimented place where Haida people *must* always live in order to be authentically Haida. Rather, it is a location where they should always be able to, in their own (necessarily multiple, often contested, sometimes even contradictory) terms. Sovereignty At the same time, there is an inescapably political dimension to the attempt to render Haida Gwaii as the homeland of a still open Haida future. The assertion of the (located) openness of the future does not necessarily make it so. As I noted in the first part of this dissertation, the flow of Haida departures and returns unfold in the broader context of the settler, capitalist state; indeed, they are made necessary in part by the current absence of economic opportunity on island, just as the arrival of potentially threatening strangers is a result of their privileged position in the very capitalist economy they seek to escape. Constituting futures in which Haida people have the freedom to engage with that economy (and settler society more generally) as they see fit while retaining the capacity to come home (complicated as that process might be) also reiterates the inescapability of some form of engagement with that socio-economy. Likewise, the notion of Haida Gwaii as Haida homeland cannot be separated from current Haida struggles to assert their rights to the lands and waters of Haida Gwaii, the resources found therein, and their sovereign capacity to govern themselves and the islands in the ways they find appropriate. This is, recall, the very crux of the CHN’s own commitment to the assurance of futurity, as it is only by positioning itself as the rightful, sovereign government of the Haida Nation and its homeland of Haida Gwaii that it can adequately care for the islands and protect them from external threat. And the continuing advance of the Enbridge project despite fierce opposition from CHN, the Old Massett Village Council, their Haida constituents, and the non-Haida actors with whom they are “united against Enbridge” (and this alongside protest all over the northwest coast) gives the nightmare futures of environmental collapse – pushed through by corporate interests and Canadian politicians - a frightening immanence. The assertion of the openness of the future is made, in short, in (and against) a context in which closures remain endemic. And yet, something has changed in this landscape from the initial erasures of Native futurity we drew out in the first chapter. In the narratives of colonial actors like Duncan Campbell Scott, it was absolutely clear that “Indians” were disappearing because their social worlds were being superseded by more “civilized” ways of living and being, ones that these Native subjects would also, inevitably, in the end, adopt (or failing that, perish outright). There was a future. It was simply a settler one. But the nightmare futures of that my Haida interlocutors ward against in their own future-making reach beyond Haida life alone. Environmental collapse, most dramatically, threatens the sustainability of all life; toxins in the land and the waters threaten human lives regardless of their relative indigeneity, race, or gender (e.g. Choy 2011; Crate 2011). Put another way, the impetus for non-Haida (and non-First Nations subjects more generally) to be “united against Enbridge” with their indigenous neighbours comes in no small part because an oil spill also profoundly threatens the lives and livelihoods of non-Aboriginal coastal residents, a fact which Masa Takei, among others, made clear in Chapter 3. Nor is the anxiety that young people might abandon their small town to pursue economic and educational advantage in an urban context limited to reserve communities. Instead, the compulsions of capitalist economic life compel such migrations throughout the globe. The nightmare futures that Haida people constitute alternative futures to ward against are not just future of indigenous erasure under settler colonialism. They are erasures of settler society itself. There is thus an extraordinary political claim embedded in Haida future-making, a claim which gains its power precisely *because* Haida future-making as we have seen it does not (perhaps cannot) escape from the larger field of settler-colonial determination. Instead, in Haida future-making we find the implicit assertion that Haida people can make futures that address the dilemmas of Haida *and* settler life alike, ones that can at least “navigate,” to borrow Appadurai’s phrasing, towards possible futures that do not end in absolute erasure. If Povinelli and Byrd are correct and settler liberal governance makes itself possible and legitimate through a perpetual deferral of the problems of the present, then part of the power of Haida future-making is to expose the threatening non-futures that might emerge out of this bracketed present, to expose as lie the liberal promise of a good life always yet to come and to attempt to constitute alternatives. It is no coincidence that we find this in the midst of a struggle over sovereignty. And this not just in the sense of the Council of the Haida Nation’s ongoing assertion of its sovereign right to govern the lands and waters of Haida Gwaii on behalf of all Haida people, as we saw in Chapter 5. Rather, as Joanne Barker has argued, over the course of the latter half of the twentieth century sovereignty has emerged as a: particularly valued term within indigenous scholarship and social movements and through the media of cultural production. It [is] a term around which analyses of indigenous histories and cultures were organized and whereby indigenous activists articulate their agendas for social change (Barker 2005:18). Through the assertion of sovereignty, indigenous political leaders, activists and scholars refute “the dominant notion that indigenous people [are] merely one among many ‘minority groups’ under the administration of state social service and welfare programs.” Instead, “sovereignty defines indigenous people with concrete rights to self-government, territorial integrity, and cultural autonomy under international law” (18). The trouble is, of course, that indigenous claims to sovereignty are always made within the context of colonial nation-states, ones whose own legitimacy is put at considerably risk both by the prospect of self-determining indigenous Nations (re)-emerging within their boundaries and the troubling of their own historical narratives of sovereign rights (cf: Comaroff and Comaroff 2003b). (One of these narratives, which reinterpreted indigenous lands as *terra nullius* and thus open to occupation, we’ve encountered already in Chapter 3). Thus, while sovereignty might indeed “define” indigenous peoples with concrete rights to territorial Title and self-determination, in theory equal under international law to the states who also lay claim to their territories, that definition does not in and of itself make possible the *practice* of this sovereignty. In this regard settler states such as Canada have shifted in their response to First Peoples’ sovereignty claims from outright rejection to a set of policies of selective recognition,5 but even the latter still positions Native nations as being subject to the authority and oversight (if not the structural forms) of the state. This means, as we have seen in Chapter 5, that indigenous governments such as the Council of the Haida Nation are in a precarious position, attempting to constitute their own sovereign authority without access to many of the conventional means of sovereignty in Western political thought – e.g., the monopoly on legitimate violence (Weber 1946), decisive authority to make and enact law (Schmitt 2005), or exclusive territorial control (Brown 2010; cf: Hobbes 1994). Alongside this precarity is the equally anxious question of whether or not sovereignty is even an appropriate analytical to center indigenous rights around precisely because it is historically a Western concept, one that had been drawn on to dispossess indigenous peoples over the course of settler colonial history (Barker 2005:18–19). (Indeed, the very next essay in Barker’s edited volume, by Mohawk scholar Taiake Alfred, categorically rejects sovereignty as an inappropriate tool for indigenous political assertions for these reasons and, also, because it draws attention away from developing and furthering “genuinely” Aboriginal political modes of thought (Alfred 2005; cf: Alfred 2009). The fact that sovereignty remains such a preeminent concept in the struggle for indigenous rights even though it is both epistemologically problematic and politically constrained has meant that there has been a recent push in both anthropology and indigenous studies to “widen” the definition of sovereignty, so that it might encompass multiple forms of indigenous social, political and legal practice outside of the conventional purview of “sovereign power” (e.g. Cattelino 2008; Richland 2011; Simpson 2000; Simpson 2014). Or, as Joanne Barker puts it: There is no fixed meaning for what *sovereignty* is – what it means by definition, what it implies in public debate, or how it has been conceptualized in international, nation, or indigenous law. Sovereignty – and its related histories, perspectives, and identities – is embedded within the specific social relations in which it is invoked and given meaning. How and when it emerges and functions are determined by the “located” political agendas and cultural perspectives of those who rearticulate it into public debate or political document to do a specific work of opposition, invitation, or accommodation. It is no more possible to stabilize what *sovereignty* means and how it matters to those who invoke it than it is to forget the historical and cultural embeddedness of indigenous peoples’ multiple and contradictory political perspectives and agendas for empowerment, decolonization, and social justice (Barker 2005:21, emphasis original). The opening up of sovereignty as flexible, multiple, and subject to all manner of diverse rearticulations carries particular weight (and, perhaps, ambiguity) since, as a historical concept in Western political theory, sovereignty was overwhelmingly concerned with closure. As Wendy Brown argues in her Walled States, Waning Sovereignty, the classic vision of sovereign power rests in the capacity to divide the inside from the outside, to make borders around a people – a “nation” – and separate that people from those outside it. Thus Schmitt’s “friend-enemy” distinction, for instance, or even John Locke’s consistent preoccupation with fences as a way of marking the existence of territory (Brown 2010; cf: Schmitt 1996; Locke 1988). The historical conditions of indigenous sovereignty claims in the context of settler colonialism make such absolute closures impossible for indigenous peoples. We might add, though, that their persistent presence also challenges the closure of the settler nation-state. Indeed, this is part of Brown’s point. The very fact that we see ever more spectacular performances of sovereign power on the part of contemporary nation-states – e.g., the titular “walls” that are being constructed along the borders of an increasing number of states - is a sign of the very insecurity of their political authority (Brown 2010).6 The conditions of settler colonial sovereignty, in other words, may be rather more “open,” and thus closer to those of indigenous “nation-within-nations,” then they may at first appear. If this means, in turn, that the future of settler political life is becoming as uncertain as the future for indigenous life has always been since the advent of settlement, then this means only what we have already begun to see: the dilemmas that Haida people confront in their future-making practices are also the dilemmas facing settler society. Take Chapter 4, in which the absence of any “one” definitive governing entity compels the constitution of an aspirational framework of accountability which could, were it realized, render navigable Haida relations to the many governments that claim their loyalties. As I hinted at there, such dilemmas are not restricted to the Haida sociopolitical world; rather, they may in fact be endemic to contemporary democratic societies and the multiple forms of governance (licit and otherwise) that emerge therein. In suggesting that there are Haida ways of refiguring a shared Haida-settler set of contemporary problematics, we might think of Haida future-making as simultaneously an instantiation of the multiple, flexible and always contingently located practices of sovereignty to which Barker points and a different way of thinking about indigenous political potentiality. In the former sense, Haida future-making is without doubt concerned with carving out spaces in which Haida existence can continue, expand, and change without losing the capacity to reproduce itself as, precisely, Haida existence. Thus the processes of homecoming we explored in Chapter 2, or Chapter 5’s explicitly political attempts to establish control over the islands for future generations. If the absence of indigenous sovereignty is the absence of the capacity of an indigenous people to (self)-determine their own futures, then the constitution of Haida futures can be seen exactly as sovereign work, whether in the overt sense of the Council of the Haida Nation’s assertions or the somewhat more implicit mode of Alice Stevens’ proposed mass adoptions. Significant here, though, is the fact that these acts of future-making carry meanings beyond their status as “responses” to the social and political dilemmas of contemporary Haida life. Thus Alice Stevens’ adoptions bring “hippie” children into the framework of Haida kinship relations, in one sense neutralizing their potential threat, but also constituting a complex new network of social relations between Haida and non-Haida whose potential significances go well beyond the protection of Haida territory and resources; thus the Council of the Haida Nation emerges as a “state-like” governing entity through its authorizing promise to “take care” of the islands, but in so doing takes on a series of new roles in Haida political life whose full consequences remain to be seen. If it is a sovereign action to envision an opening of possible futures for Haida people, then this very openness might also exceed the boundaries of sovereignty as a problematic for indigenous people even as it responds to them. Which is also, perhaps, why Haida futures seem so consistently to sketch out social, ecological, and political fields that encompass non-Haida; more, that are futures for Canada as well as for the Haida people living within the nation-state’s borders. Or, at least, futures that have the capacity to be so. What would it mean to figure an indigenous sovereignty that speaks beyond itself, one that promises to invert the order of settler domination through reconfiguring the shared futures of indigenous and settler peoples? This would not be a sovereignty premised on territorial closure, or even absolute political autonomy. It would, however, decisively overturn any settler colonial anticipations of the inevitable erasure of Native peoples. Quite the opposite, it would position indigenous practices of anticipation, aspiration, certainty, and anxiety at the forefront of contemporary modes of political imagination. Unsettling Futures A question remains, however. Could such a refiguring of the temporal and political horizon of settler and indigenous relationships remain possible even if the futures that indigenous people work to constitute remain unrealized in the settler colonial present? Or, put another way, we must always be careful not to conflate a capacity *to* form new futures for settler nation-states with the actual materializations of these futures. The Haida futures that I have discussed, even as they promise possible ways of navigating – of restructuring, even – the settler-Haida present, remain firmly bound by the colonial constraints of this present. But perhaps the stakes here have never been about overthrowing the Canadian colonial order outright. Rather, what I hope this dissertation has shown is that Haida future-making has the capacity to *unsettle* the settler colonial present, to challenge its received categories and demonstrate how, slowly, gradually, Haida people are reconfiguring its terms through the work of producing the future. Certainly, the sheer fact of Haida futurity should put to the lie any further notion that Haida people exist only to replicate their past or live only in the deferral of their eventual disappearance. The future is alive and well in Old Massett, although this does not meant that it is not also a site of profound anxieties. In working to ward off those anxieties through the juxtaposition of nightmare futures against their more desirable alternatives, then, Haida people unsettle the epistemological foundations of the forms of settler colonialism and liberalism against which Byrd and Povinelli write. At the same time (if you’ll pardon the pun), I think we can see the social work that futuremaking does iteratively, as a gradual reshaping of the actual conditions of Canadian society. Here I borrow Judith Butler’s suggestion, following Foucault, that the regulatory norms of society function only through their consistent and unstable reiteration (and materialization) in everyday social life.7 From this perspective, the ways in which Haida people work within and even reiterate the constraints and demands of Canadian settler mainstream society can also slowly and strategically *shift* those very constraints and demands, materializing a HaidaCanadian future that might in fact be quite different from the present even as it does not ever fully “escape” from its dilemmas. Perhaps the most unsettling potential of all here lies simply in the ways in which Haida people incorporate the conditions of the settler colonial present as being paths towards Haida futures. Not vanished, or vanquished. Ongoing.

### 1AC – Method

#### 1] 1AR theory is legit – anything else means infinite abuse – drop the debater, competing interps, and the highest layer – 1AR are too short to make up for the time trade-off – no RVIs – 6 min 2NR means they can brute force me every time.

**Nuanced debates about the intricacies of space policy are key to preventing militarization – narrowing debates intellectual aperture to meta-theories for governmental behavior makes constructive advocacy impossible**

**Weeden 15** [Brian Weeden is a former U.S. Air Force space and missile operations officer and currently technical adviser for Secure World Foundation, a non-profit organization dedicated to the long-term sustainable use of outer space for benefits on Earth. He is also a doctoral candidate in public policy and public administration at George Washington University. 1/7. "The End of Sanctuary in Space." https://medium.com/war-is-boring/the-end-of-sanctuary-in-space-2d58fba741a]

Plus, there’s the **larger question** of whether a more **aggressive approach** is in the best interest of all of America’s space organizations, including the burgeoning **commercial space sector.** We live in an age of **proliferating anti-satellite capabilities.** There is a growing body of evidence that China is actively developing at least two hit-to-kill **ASAT** weapon systems. The development process has included at least **five tests** of these systems, including one that created thousands of pieces of space **debris**. Russia has fielded operational ASAT capabilities in the past, and Russian officials have recently stated that development work has started again on an **air-based ASAT** system. Not to be outdone, elements of the Indian government have also **signaled** interest in developing both missile defense and ASAT **capabilities** themselves. The United States and many of its allies in Europe and Asia are fielding missile defense capabilities that have significant ASAT capabilities, as demonstrated by the United States’ use of the same missile defense system to destroy a non-functioning satellite in 2008. The number of other countries that already possess ballistic missile and space launch technology—and could thus develop their own crude ASAT capabilities—is growing. The U.S. national security space community sees this shift towards a more “contested” space environment as a very worrisome trend. There are currently more than 150 U.S. military and intelligence satellites in orbit, providing important national security capabilities such as precision navigation and timing, global communications, missile warning, and intelligence, surveillance and reconnaissance. The proliferation of ASAT capabilities and the **threat** they are thought to pose to these space systems presents a **serious challenge** to the **U**nited **S**tates’ military and intelligence capabilities. The concern extends not only to the ability of the United States to defend its own national security interests, but also to its ability to continue to contribute to the defense of its **allies**. The United States announced a new National Security Space Strategy in early 2011 that detailed five strategic approaches for dealing with a more “congested, competitive and contested space environment.” The strategy includes a strong push for developing and promoting responsible norms of behavior in space, increased partnership and cooperation with allies and commercial firms and a shift toward making U.S. national security space capabilities more resilient to attacks. The strategy also includes preventing and deterring aggression on U.S. national security space systems, and, should deterrence fail, defeating attacks on said systems. Since the release of the strategy, the U.S. government has been relatively public about how it will implement the first three approaches, but less so about the last two. That has now changed. Congress has included language in the National Defense Authorization Act for the 2015 fiscal year, the primary piece of legislation that authorizes and directs the activities of the U.S. military, calling on the U.S. national security space community to report to Congress how it plans to deter and defeat adversary attacks on U.S. space systems. The NDAA language requires the Secretary of Defense and the Director of National Intelligence to produce a study on the role of offensive space operations, and specifies that the majority of the $32.3 million that Congress gave to the Space Security and Defense Program in 2015 must be used for “the development of offensive space control and active defensive strategies and capabilities.” The NDAA language does not stipulate what is meant by offensive or active defensive capabilities, but when combined with recent academic writings from within the U.S. military, it suggests that America’s strategy for protecting its satellites is taking a more aggressive turn. This essay discusses the evolution of U.S. national security space community’s approach to using space and protecting space assets over the last several decades, and explains why some in the community are now contemplating a more aggressive approach. It frames the discussion through four established schools of thought on the military uses of space: sanctuary, space control, high ground and survivability. These schools were first developed as potential space power doctrines by David Lupton in an article for Strategic Review in 1983, and more fully fleshed out in his 1988 book On Space Warfare: A Space Power Doctrine. They were re-conceptualized as schools of thought, rather than doctrine, by Peter Hays in his 1994 doctoral dissertation. In Hays’ view, the four schools of thought are less codified and have more overlap between them than a strict doctrinal definition. U.S. policy on national security space is a **conglomeration** of the **four schools of thought**, with one school of thought usually prioritized over the others. This conglomeration is a result of the interagency process for creating policy on national security issues, and the bargaining that takes place between the different agencies involved in the decision. The U.S. government is not a **unitary actor**, and the perspective of each of the **many agencies** within the **interagency decision-making process** usually reflects a preference for one of these **schools** over the other. As a result, **decisions** made by the U.S. government on national security space policy often reflect a **compromise** between **multiple schools of thought**, rather than a **strict adherence** to one **over all the others**. Why choose to contextualize this issue from the **perspective of the military** when space activities encompass much more than just the military? The **reason** is that in the realm of policy, and space policy in particular, **national security** has **dominated decision making** since the very beginning of the Space Age, and still holds a **privileged position** in space **policy debates**. This dominance is seen in the size of the U.S. national security space budget—nearly $27.5 billion compared to NASA’s $17.8 billion in 2012—but also in the use of the National Security Council process to make many space policy decisions. Finally, it is important to understand why the **focus** of this essay is on the policies and activities of the **U**nited **S**tates and not on the **other countries** involved. The intent is not to place **blame** for the current strategic instability in space solely on the **U**nited **S**tates. The situation is the result of the actions of **several** different **countries**, as well as the overarching **geopolitical dynamics** present in the world today. As a result of America’s **democratic** and **pluralistic nature**, its policies and actions are **subject** to more **scrutiny** and **debate than others**. That should be seen as a **virtue and not a defect**. The United States is still the world leader in space, in terms of both soft and hard power. The intent of this essay is to encourage **constructive debate** on this **important issue** in the hope that it leads to **policies** and **actions** that continue to enable the **U**nited **S**tates to be a **force for good** and a world leader for the foreseeable **future**.

#### Space policy scenario planning unsettles hegemonic perspectives more effectively than radically changing research agendas.

Adams, et al, 18—Lecturer in Urban Planning in the School of Geography, Earth and Environmental Sciences at the University of Birmingham (David, with Peter Larkham, Professor of Planning at Birmingham City University, and Dan Sage, Senior Lecturer in Human Resource Management and Organisational Behaviour at Loughborough University, “Planners in space?,” Town & Country Planning, 87 (8), pp.307-315, dml)

Writing some 40 years ago and against a background of the ‘limits to growth’ debate of the 1970s, Millward called for geographers, planners and other social scientists to explore seriously the possibility of moving to off-Earth space settlements.35 Although there is now a growing social science perspective on the possibilities and limits of future space visions, there are further opportunities for planners, geographers, architects and others involved with the design and management of places to respond to these debates, assimilating them into existing approaches, or creating new research areas specifically relating to the space ‘frontier’. One practical suggestion is that planners and geographers – perhaps working alongside engineers and architects – might study the feasibility of designing new Earth-based space launch megastructures. This would involve working through the possibility of improved space launches, including the impact on the surrounding population and environment, the proximity to major industrial and population centres, and the capability of existing power networks. Moreover, and considering the bleak scenarios outlined above, there are obvious parallels with how architect-planners, engineers, politicians, industrialists and leading scientists saw the urgent need to rebuild as an opportunity to reform or improve cities that before the Second World War had been suffering from different urban ailments.36 Infused by the image of a tabula rasa, the prospect of large-scale rebuilding offered the possibility to architect-planners to transform war-damaged cities and project their sometimes-radical visions of future cities. Discussions around possible space futures could, for example, unpick the way in which the sometimes lavish mid-20th century reconstruction plans offered a vehicle to boost the personal and strategic ambitions of politicians and other key decisionmakers.37 Are there lessons for entrepreneurial space enterprises in the way that powerful elites had to wrestle with bureaucratic frameworks, financial constraints, the peculiarities of a particular site, the availability of materials, the talent of architects, the desires of landowners, and, of course, the perspectives of inhabitants? Some in the planning and design community are also beginning to raise concerns over recent plans for the human inhabitation of Mars (and exploration of space, in a more general sense). For example, some are anxious that the ambitions set out by organisations such as Mars City Design® for human habitation on the ‘red planet’ represent an opportunity for architects and designers to project their visions on to a ‘blank slate’.5 This is a familiar story for planners. Since the mid-to-late-20th century, it has become almost commonplace to blame the ‘metaphysical fancies’38 of prominent white, middle-class, male experts for creating ‘alien’ spatial and temporal circuits of production, exchange and consumption that did much to eliminate spontaneity from urban life. Efforts to plan were from ‘high and afar’, informed by the empirical-analytical approaches of scientists, bureaucrats and engineers involved in the creation of large-scale rebuilding projects, and helping to realise a capitalist city in full flow. But not all reconstruction plans projected capitalist visions of the future, and some reconstruction proposals were heavily idealistic but also pragmatic. The motivations among those potential space settlers will likely differ from those agencies and space advocates pushing for the creation of permanent off-Earth settlement. So exploring the ‘cracks in the concrete’ of earlier planning visions,7 as individuals subverted ‘utopian’ narratives of the future urban environment to suit their own ends, might help to develop any discussion about human settlement of space. Second, while there are flaws in the argument about the vital, innate need to travel, there is an opportunity to nurture the human desire to cultivate a sense of inquisitiveness and fulfilment. Or to paraphrase Alfred North Whitehead, ‘physical wandering is important’, but ‘greater still is the power of [humankind’s] adventures of thought’ into ‘uncharted seas of adventure’.39 Ancient human migration brought people into contact with different customs of various cultures, philosophies, and political and social systems.1 It is, therefore, valuable to consider these perspectives to gain further insight into our own beliefs, perspectives and actions. Increased exploration of space would present a clear opportunity to further knowledge about the universe, which would stimulate human curiosity and potentially lead to some unpredictable social, economic and environmental discoveries, but would also help humankind to reflect on current and near-future Earth-based practices. Moreover, it is often said that people act and live out the past in the present. And planning tools such as maps, images, diagrams and future scenarios can certainly influence present and future action; but they can also shape how we think about the past.40 At some indeterminate point beyond the future horizon, people may be living in outer space and on other worlds, and since differing cultures stem in part from environmental conditions, it is possible that these individuals will be greatly different from earlier cultures, planning efforts, contexts, perceptions and attitudes. Hence, if a new age of space exploration marks our opportunity to ‘start afresh’, then there is the obvious possibility of examining capitalism, along with other economic models, and legal frameworks. Given that there will be long communication delays that may make MarsEarth governance cumbersome, regulatory and administrative functions will need to hold authority over new lands, efficiently administer public policy and urban planning, and take responsibility to create a society in space – a theme much explored in popular science fiction.26 Changes to civilisation in terms of technology, culture and everyday life make a strict interpretation of history something of an unreliable guide to speculative spatial imaginaries. For instance, development in satellite technology and space probes may significantly advance our knowledge and understanding of the universe, thus limiting the need for physical human wanderings. Nevertheless, there are several fundamental questions that planners might explore regarding the purpose of the colony, the motivations of colony founders, the possible location of the settlement relative to the Earth and Sun, and the size and characteristics of the object on which colonists wish to settle. Various academic works, popular histories, films and novels detail the why, when and how of frontier development, while the location of settlements and the links between regions are well established areas of enquiry for social scientists. In this sense, an exploration of the processes, agents and agency that create, shape and reshape urban form would help inform wider discourse on future space trajectories.41 However, planners, geographers and urban historians, for example, could enrich discussions on space by drawing on earlier research into the conditions necessary for permanent human settlement, and the economic, social and environmental contexts in which human habitation thrives or fails (i.e. the functions of defence, shelter, trade, and community).42 Although the design of a space colony would have to work within engineering and technological constraints, there are concerns that an eclectic mix of architectural styles would result in a ‘Disney-like’ settlement.5 What key planning principles might guide development? Could ‘established’ planning concepts of visionary urbanists such as Howard and his Garden City, Burnham’s view on the rebuilding of Chicago, Le Corbusier’s radiant city, Frank Lloyd Wright and his suburban city, and Abercrombie and Forshaw’s plans for London’s city-region be brought into dialogue with emerging visions for life beyond Earth’s limits? At the micro-scale, investigation of the geometric properties of earlier urban forms would also contribute to any wider understanding of the processes shaping urban form. There are many studies of urban components (streets, blocks, plots, buildings, land uses, agriculture, public spaces, services, and infrastructure) that could inform debates about future colony design. Moreover, planners’ interpretation of computational approaches and big data would also allow modelling of future off-Earth urban patterns at different spatial and temporal scales. And, at some point in the future, following the establishment of a colony, how will the insertion of new structures or other features affect the characteristics of a settlement? How might we manage fragile ‘historic’ areas like the Apollo 11 landing site when there are pressures to develop?5 This may stimulate a careful analysis of past examples of how to achieve the organic arrangement of the urban fabric, land uses, densities and human interactions to create a rich, diverse urban experience. Perhaps the most enticing prospect is that any plans to colonise asteroids, planets or even stars may be led by genetically ‘improved’ humans, cyborgs, or forms of artificial intelligence. This then opens up a completely new set of ways to think about planning in ‘post-human’ worlds. Conclusion Countless others have sought to dampen some of the more excited claims made about increased human encounters with space. There is no unifying intellectual consensus around the feasibility of moving large numbers of people off Earth: there is a lack of safe, attractive, reliable and cheap modes of transport to break through Earth’s atmosphere; for many, potentially world-changing space visions belong in the realm of science fiction, or are best left to the work of cosmologists, engineers, or those in the natural sciences; and many feel that any economic case and the recent wave of enthusiasm will eventually subside. More fundamentally, the importance of these points to those in the planning community might seem a matter of debate: if there are flaws in the messages typically presented by supporters of space exploration, so what? Planning, like other social sciences, contains a vibrant and eclectic mix of different schools of thought, where competing ideas jostle for prominence. Consequently, any bold call for radical changes to research agendas that contribute more to contemporary or near-future debates about space would require significant adjustments in bureaucratic structures, the attitudes of educators, research councils, conference organisers, learned societies, and the editorial boards of prominent journals. Simply put, for many social scientists, the potential economic, environmental and human impact of space exploration remains outside the ambit of other more pressing Earthly matters. Although the idea of focusing on space might invoke feelings of indifference, resistance or even enmity in some, this article does at least set out potential areas that may provoke interest from planners. The key message, though, besides thinking through the practical implications and possibilities of developing new launch sites, new satellites and off-Earth trade links, is that thinking about space stimulates the enabling and motivational facets of the imagination.7 This involves a mental shift away from being immersed in the present in our perceptions, perspectives and views. It certainly offers an opportunity to review earlier planning ‘imaginaries’, to use these ideas to set out new kinds of places beyond Earth, but also as a way of reflecting on how off-Earth innovations might benefit the ways in which planners and others approach the task of tackling some of the sustainability challenges here on Earth. There may be some truth in deGrasse Tyson’s34 view that ‘nothing spurs cross-pollination of ideas like space exploration’; hence there is opportunity here for imaginative planning ideas to penetrate the discussions on space that might otherwise be reserved for entrepreneurs or cosmologists. Perhaps this needs to happen before the boarding gates open…

#### Evolution proves our theory true

**Johnson and Thayer 16** – Dominic D. P. Johnson, D.Phil., Ph.D.\* and Bradley A. Thayer, Ph.D., “The evolution of offensive realism Survival under anarchy from the Pleistocene to the present,” https://www.cambridge.org/core/services/aop-cambridge-core/content/view/56B778004187F70B8E59609BE7FEE7A4/S073093841600006Xa.pdf/div-class-title-the-evolution-of-offensive-realism-div.pdf

Few principles unite the discipline of international relations, but one exception is anarchy—the absence of government in international politics. Anarchy is, ironically, the ‘‘ordering’’ principle of the global state system and the starting point for most major theories of international politics, such as neoliberalism and neorealism.42,43,44,45 Other theoretical approaches, such as constructivism, also acknowledge the impact of anarchy, even if only to consider why anarchy occurs and how it can be circumvented.46,47 Indeed, the anarchy concept is so profound that it defines and divides the discipline of political science into international politics (politics under conditions of anarchy) and domestic politics (politics under conditions of hierarchy, or government). Given the prominence of the concept in present-day international relations theory, it is striking that anarchy only took hold as a central feature of scholarship in recent decades, since the publication of Kenneth Waltz’s Theory of International Politics in 1979. In fact, however, **anarchy has been a constant feature of the entire multimillion year history of the human lineage (and indeed the 3.5 billion–year history of the evolution of all life on Earth before that). It is not just that we lack a global Leviathan today; humans never had such a luxury. The fact that human evolution occurred under conditions of anarchy, that we evolved as hunter-gatherers in an ecological setting of predation, resource competition, and intergroup conflict, and that humans have been subject to natural selection** for millions of years **has profound consequences for understanding human behavior**, not least how humans perceive and act toward others. Scholars often argue over whether historically humans experienced a Hobbesian ‘‘state of nature,’’ but—whatever the outcome of that debate—it is certainly a much closer approximation to the prehistoric environment in which human brains and behavior evolved. **This legacy heavily influences our decision-making and behavior today, even—perhaps especially—in the anarchy of international politics**. We argue that **evolution under conditions of anarchy has predisposed human nature toward the behaviors predicted by offensive realism: Humans**, particularly men, **are strongly self-interested, often fear other groups, and seek more resources, more power, and more influence** (as we explain in full later). **These strategies** are not unique to humans and, in fact, **characterize a much broader trend in behavior among mammals as a whole—especially primates**—as well as many other major vertebrate groups, including birds, fish, and reptiles. **This recurrence of behavioral patterns** across different taxonomic groups **suggests that the behaviors characterized by offensive realism have broad and deep evolutionary roots**. This perspective does not deny the importance of institutions, norms, and governance in international politics. On the contrary, it provides or adds to the reasons why we demand and need them, and indeed why they are so hard to establish and maintain. Until recently, **international relations theorists rarely used insights from the life sciences to inform their understanding of human behavior**. However, **rapid advances in the life sciences offer increasing theoretical and empirical challenges to scholars in** the social sciences in general and **international relations** in particular, who are therefore under increasing pressure to address and integrate this knowledge rather than to suppress or ignore it. Whatever one’s personal views on evolution, **the time has come to explore the implications of evolutionary theory for mainstream theories of international relations**. **The most obvious challenge that evolutionary theory presents to international relations concerns our understanding of human nature**. Theories purporting to explain human behavior make explicit or implicit assumptions about preferences and motivations, and mainstream theories in international politics are no exception. Many **criticisms of international relations theories focus on these unsubstantiated or contested assumptions about underlying human nature. The parsimony of general theories depends on how well they explain phenomena across space and time**; in other words, the more closely they coincide with empirical observations across cultures and throughout history. The most enduring theories of international relations, therefore, will be ones that are able to incorporate (or at least do not run against the grain of) evolutionary theory. Although Thomas Hobbes claimed to have deduced Leviathan scientifically from ‘‘motion’’ and the physical senses, he was writing two hundred years before Darwin and so had no understanding of evolution. International relations scholars have tended to claim to deduce their own theories from Hobbes, or subsequent philosophers who followed him, and we suggest it is time to revisit the idea of foundational scientific principles. **Starting with biology, or with human evolutionary history, has never been typical in international relations scholarship**, but this approach is now less exotic than it once seemed as innovators in a range of social sciences, including economics, psychology, sociology, and political science, pursue this line of inquiry. **International relations stands to gain from** similar **interdisciplinary insights**. At the dawn of the 21st century, an era that will be dominated by science at least as much as philosophy, **we have the opportunity to move away from untested assumptions about human nature. Instead, we can make more concrete predictions about how humans tend to think and act in different conditions, based on new scientific knowledge about human cognition** and behavior, **and in particular a greater understanding of the social and ecological context in which human brains and behaviors evolved**. But what was that context?

#### Shallow disavowals of the state create a pessimism trap – this card ends the debate.

Lightfoot 20—Associate professor in First Nations and Indigenous Studies and the Department of Political Science, University of British Columbia, Ojibwe (Sheryl, “The Pessimism Traps of Indigenous Resurgence,” *Pessimism in International Relations*, Chapter 9, pp 162-170, SpringerLink, dml)

Pessimism Trap 2: The State is Unified, Deliberate and Unchanging in Its Desire to Dispossess Indigenous Peoples and Gain Unfettered Access to Indigenous Lands and Resources In other words, colonialism by settler states is a constant, not a variable, in both outcome and intent. Further, the state is not only intentionally colonial, but it is also unifed in its desire to co-opt Indigenous peoples as a method and means of control. In 2005’s Wasase, Alfred presents the state as unitary, intentional and unchanging in its desire to colonise and oppress Indigenous peoples noting, ‘I think that the only thing that has changed since our ancestors first declared war on the invaders is that some of us have lost heart’.22 Referring to current state policies as a ‘self-termination movement’, Alfred states, ‘It is senseless to advocate for an accord with imperialism while there is a steady and intense ongoing attack by the Settler society on everything meaningful to us: our cultures, our communities, and our deep attachments to land’.23 Alfred’s Peace, Power, Righteousness (2009) also argues that the state is deliberate and unchanging, stating quite plainly that ‘it is still the objective of the Canadian and US governments to remove Indians, or, failing that, to prevent them from benefitting, from their ancestral territories’.24 Contemporary states do this, he argues, not through outright violent control but ‘by insidiously promoting a form of neo-colonial self-government in our communities and forcing our integration into the legal mainstream’.25 According to Alfred, the state ‘relegates indigenous peoples’ rights to the past, and constrains the development of their societies by allowing only those activities that support its own necessary illusion: that indigenous peoples today do not present a serious challenge to its legitimacy’.26 Linking back to the aim of co-option, Alfred argues that while the state’s desire to control Indigenous peoples and lands has never changed, the techniques for doing so have become subtler over time. ‘Recognizing the power of the indigenous challenge and unable to deny it a voice’, due to successful Indigenous resistance over the years, ‘the state has (now) attempted to pull indigenous people closer to it’.27 According to Alfred, the state has outwitted Indigenous leaders and ‘encouraged them to reframe and moderate their nationhood demands to accept the fait accompli of colonization, (and) to collaborate in the development of a “solution” that does not challenge the fundamental imperial lie’.28 In a similar vein, Coulthard’s central argument is centred on his understanding of the dual structure of colonialism. Drawing directly from Fanon, Coulthard finds that colonialism relies on both objective and subjective elements. The objective components involve domination through the political, economic and legal structures of the colonial state. The subjective elements of colonialism involve the creation of ‘colonized subjects’, including a process of internalisation by which colonised subjects come to not only accept the limited forms of ‘misrecognition’ granted through the state but can even come to identify with it.29 Through this dual structure, colonial power now works through the inclusion of Indigenous peoples, actively shaping their perspectives in line with state discourses, rather than merely excluding them, as in years past. Therefore, any attempt to seek ‘the reconciliation of Indigenous nationhood with state sovereignty is still colonial insofar as it remains structurally committed to the dispossession of Indigenous peoples of our lands and self-determining authority’.30 Concerning the state in relation to Indigenous peoples on the international level, Corntassel argues that states and global organisations, for years, have been consistently framing Indigenous peoples’ self-determination claims in ways that ‘jeopardize the futures of indigenous communities’.31 He claims that states frst compartmentalise Indigenous self-determination by separating lands and resources from political and legal recognition of a limited autonomy. Second, he notes, states sometimes deny the existence of Indigenous peoples living within their borders. Thirdly, a political and legal entitlement framing by states deemphasises other responsibilities. Finally, he claims that states, through the rights discourse, limit the frameworks through which Indigenous peoples can seek self-determination. Like Alfred and Coulthard, Corntassel has concluded that states are deliberate and never changing in their behaviour. With this move, Corntassel limits and actually demeans Indigenous agency, overlooking the reality that Indigenous organisations themselves chose the human rights framework and rights discourse as a target sphere of action precisely because, as was evident in earlier struggles like slavery, civil rights or women’s rights, these were tools available to them that had a proven track record of opening up new possibilities and shifting previous state positions and behaviour. Indigenous advocates also cleverly realised, by the 1970s, that the anti-discrimination and decolonisation frames could be used together against states. States did, in no way, nefariously impose a rights framework on Indigenous peoples. Rather, Indigenous organisations and savvy Indigenous political actors deliberately chose to frame their self-determination struggles within the human rights framework in order to bring states into a double bind where they could not credibly claim to adhere to human rights and claim that they uphold equality while simultaneously denying Indigenous peoples’ human rights and leaving them with a diminished and unequal right of self-determination. But, because he is caught in the pessimism trap of seeing the state only as unified, deliberate and unchanging, Corntassel overlooks and diminishes the clear story of Indigenous agency and the potential for positive change in advancing self-determination in a multitude of ways. Pessimism Trap 3: Engagement with the Settler State is Futile, if Not Counter-Productive Since the state always intends to maintain, if not expand, colonial control, and is seeking to co-opt as many Indigenous peoples as possible in order to maintain or expand its dispossession and control, it is therefore futile, at best, and actually dangerous to Indigenous existence to engage with the state. Furthermore, all patterns of engagement will lead to co-optation as the state is cunning and unrelenting in its desire to co-opt Indigenous leaders, academics and professionals in order to gain or maintain control of Indigenous peoples. Alfred argues, in both his 2005 and 2009 books, that any Indigenous engagement with the state, including agreements and negotiations, is not only futile but fundamentally dangerous, as such pathways do not directly challenge the existing colonial structure and ‘to argue on behalf of indigenous nationhood within the dominant Western paradigm is self-defeating’.32 Alfred states that a ‘notion of nationhood or self-government rooted in state institutions and framed within the context of state sovereignty can never satisfy the imperatives of Native American political traditions’33 because the possibility for a true expression of Indigenous self-determination is ‘precluded by the state’s insistence on dominion and its exclusionary notion of sovereignty’.34 Worst of all, according to Alfred, when Indigenous communities frame their struggles in terms of asserting Aboriginal rights and title, but do so within a state framework, rather than resisting the state itself, it ‘represents the culmination of white society’s efforts to assimilate indigenous peoples’.35 Because it is impossible to advance Indigenous self-determination through any sort of engagement with the state, Coulthard also advocates for an Indigenous resurgence paradigm that follows both his mentor Taiaiake Alfred but also Anishinaabe feminist theorist Leanne Simpson.36 As Coulthard writes, ‘both Alfred and Simpson start from a position that calls on Indigenous peoples and communities to “turn away” from the assimilative reformism of the liberal recognition approach and to instead build our national liberation efforts on the revitalization of “traditional” political values and practices’.37 Drawing upon the prescriptive approach of these theorists, Coulthard proposes, in his concluding chapter, five theses from his analysis that are intended to build and solidify Indigenous resurgence into the future: 1. On the necessity of direct action, meaning that physical forms of Indigenous resistance, like protest and blockades, are very important not only as a reaction to the state but also as a means of protecting the lands that are central to Indigenous peoples’ existence; 2. Capitalism, No More!, meaning the rejection of capitalist forms of economic development in Indigenous communities in favour of land-based Indigenous political-economic alternative approaches; 3. Dispossession and Indigenous Sovereignty in the City, meaning the need for Indigenous resurgence movements ‘to address the interrelated systems of dispossession that shape Indigenous peoples’ experiences in both urban and land-based settings’38; 4. Gender Justice and Decolonisation, meaning that decolonisation must also include a shift away from patriarchy and an embrace of gender relations that are non-violent and refective of the centrality of women in traditional forms of Indigenous governance and society; and 5. Beyond the Nation-State. While Coulthard denies that he advocates complete rejection of engagement with the state’s political and legal system, he does assert that ‘our efforts to engage these discursive and institutional spaces to secure recognition of our rights have not only failed, but have instead served to subtly reproduce the forms of racist, sexist, economic, and political confgurations of power that we initially sought…to challenge’.39 He therefore advocates expressly for ‘critical self-refection, skepticism, and caution’ in a ‘resurgent politics of recognition that seeks to practice decolonial, gender-emancipatory, and economically nonexploitative alternative structures of law and sovereign authority grounded on a critical refashioning of the best of Indigenous legal and political traditions’.40 Corntassel also demonstrates the third pessimism trap, that all engagement with the state is ultimately futile. For the most part, however, Corntassel’s observation is that the UN system operates like a reverse Keck and Sikkink ‘boomerang model’ and ‘channels the energies of transnational Indigenous networks into the institutional fiefdoms of member countries’, by which an ‘illusion of inclusion’ is created.41 He argues that, in order to be included or their views listened to, Indigenous delegates at the UN must mimic the strategies, language, norms and modes of behaviour of member states and international institutions. Corntassel fnds that ‘what results is a cadre of professionalized Indigenous delegates who demonstrate more allegiance to the UN system than to their own communities’.42 In his final analysis, he charges that the co-optation of international Indigenous political actors is highly ‘effective in challenging the unity of the global Indigenous rights movement and hindering genuine dialogue regarding Indigenous self-determination and justice’.43 Finding that states deliberately co-opt and provide ‘illusions of inclusion’ to Indigenous political actors in UN settings, Corntassel comes to the same conclusion as Alfred concerning the futility of engagement, arguing that because transnational Indigenous networks are ‘channeled’ and ‘blunted’ by colonial state actors, ‘it is a critical time for Indigenous peoples to rethink their approaches to bringing Indigenous rights concerns to global forums’.44 Imagining a Post-Colonial Future: Pessimistic ‘Resurgence’ Versus the Optimism and Tenacity of Indigenous Movements on the Ground All of these writers advocate Indigenous resurgence, through a combination of rejecting the current reconciliation politics of settler colonial states, coupled with a return to land-based Indigenous expressions of governance as the only viable, ‘authentic’ and legitimate path to a better future for Indigenous peoples, which they refer to as decolonisation. While inherently critical in their orientation, these three approaches do make some positive and productive contributions to Indigenous movements. They help shed light on the various and subtle ways that Indigenous leaders and communities can become co-opted into a colonial system. They help us to hold leadership accountable. They also help us keep a strong focus on our traditional, cultural and spiritual values as well as our traditional forms of governance which then also helps us imagine future possibilities. As I have pointed out here, however, all three theorists are also caught in the same three pessimism traps: authenticity versus co-option; a vision of the state as unified, deliberate and never changing in its desire to colonise and control; and a view of engagement with the state as futile, if not dangerous, to Indigenous sovereignty and existence. When combined, these three pessimism traps aim to inhibit Indigenous peoples’ engagement with the state in any process that could potentially re-imagine and re-formulate their current relationship into one that could be transformative and post-colonial, as envisioned by the UN Declaration on the Rights of Indigenous Peoples. The pessimism traps together work to foreclose any possibility that there could be credible openings of opportunity to negotiate a fairer and just relationship of co-existence with even the most progressive state government. This pessimistic approach is not innocuous. By overemphasising structure and granting the state an enormous degree of agency as a unitary actor, this pessimistic approach does a remarkable disservice to Indigenous resistance movements by proscribing, from academia, an extremely narrow view of what Indigenous self-determination can and should mean in practice. By overlooking and/or discounting Indigenous agency and not even considering the possibility that Indigenous peoples could themselves be calculating, strategic political actors in their own right, and vis-à-vis states, the pessimistic lens of the resurgence school unnecessarily, unproductively and unjustly limits the field of possibility for Indigenous peoples’ decision-making, thus actually countering and inhibiting expressions of Indigenous self-determination. By condemning—writ large—all Indigenous peoples and organisations that wish to seek peaceful co-existence with the state, negotiate mutually beneficial agreements with the state, and/or who have advocated on the international level for a set of standards that can provide a positive guiding framework for Indigenous-state relations, the pessimistic lens of resurgence forecloses much potential for new and improved relations, in any form, and is very likely to lead to deeper conflicts between states and Indigenous peoples, and potentially, even violent action, which Fanon indicated was the necessary outcome. The pessimism traps of the resurgence school are therefore, likely self-defeating for all but the most remote and isolated Indigenous communities. Further, this approach is quite out of step with the actions and vision of many Indigenous resistance movements on the ground who have been working for decades to advance Indigenous self-determination, both domestically and globally, in ways that transform the colonial state into something more just and may eventually present creative alternatives to the Westphalian state form in ways that could respect and accommodate Indigenous nations. Rather, it aims to shame and blame those who wish to explore creative and innovative post-colonial resolutions to the colonial condition. The UN Declaration on the Rights of Indigenous Peoples (the Declaration or UN Declaration) was adopted by the General Assembly in 2007 after 25 years of development. The Declaration is ground-breaking, given the key leadership roles Indigenous peoples played in negotiating and achieving this agreement.45 Additionally, for the first time in UN history, the rights holders, Indigenous peoples, worked with states to develop an instrument that would serve to promote, protect and affirm Indigenous rights, both globally and in individual domestic contexts.46 Many Indigenous organisations and movements, from dozens of countries around the world, were involved in drafting and negotiating the UN Declaration and are now advocating for its full implementation, both internationally and in domestic and regional contexts. In Canada, some of the key organisational players—the Grand Council of the Crees (Eeyou Istchee), the Assembly of First Nations, and the Union of British Columbia Indian Chiefs, or their predecessor organisations—were involved in the drafting and lengthy negotiations of the UN Declaration during the 1980s, 1990s and 2000s. In the United States, organisations like the American Indian Law Alliance and the Native American Rights Fund have been involved as well as the Navajo Nation and the Haudenosaunee Confederacy, who represent themselves as Indigenous peoples’ governing institutions. From Scandinavia, the Saami Council and the Sami Parliaments all play a key role in advancing Indigenous rights. In Latin America, organisations like the Confederación de Nationalidades Indígenas del Ecuador (CONAIE) and the Consejo Indio de Sud America (CISA) advocate for implementation of the UN Declaration. The three, major transnational Indigenous organisations— the World Council of Indigenous Peoples, the International Indian Treaty Council and the Inuit Circumpolar Council—were all key members of the drafting and negotiating team for the UN Declaration, and the latter two, which are still in existence, continue their strong advocacy for its full implementation. Implementation of the UN Declaration on the Rights of Indigenous Peoples requires fundamental and significant change, on both the international and domestic levels. Because implementation of Indigenous rights essentially calls for a complete and fundamental restructuring of Indigenous-state relationships, it expects states to enact and implement a signifcant body of legal, constitutional, legislative and policy changes that can accommodate such things as Indigenous land rights, free, prior and informed consent, redress and a variety of self-government, autonomy and other such arrangements. States are not going to implement this multifaceted and complex set of changes on their own, however. They will require significant political and moral pressure to hold them accountable to the rhetorical commitments they have made to support this level of change. They will also require ongoing conversation and negotiation with Indigenous peoples along the way, lest the process becomes problematically one-sided. Such processes ultimately require sustained political will, commitment and engagement over the long term, to reach the end result of radical systemic change and Indigenous state relationships grounded in mutual respect, co-existence and reciprocity. This type of fundamental change requires creative thinking, careful diplomacy, tenacity, and above all, optimistic vision, on the part of Indigenous peoples. The pessimistic approaches of the resurgence school are ultimately of little use in these efforts, other than as a cautionary tale against state power, of which the organisational players are already keenly aware. Further, by dismissing and discouraging all efforts at engagement with states, and especially with the blanket accusations that all who engage in such efforts are ‘co-opted’ and not ‘authentically’ Indigenous, the resurgence school actually creates unnecessary negative feelings and divisions amongst Indigenous movements who should be pooling limited resources and working together towards better futures