# 1NC

## 1

#### Interpretation and violation: appropriation requires the exclusive use of property with a sense of permanence - satellites don’t meet that criteria

Gorove 84 Stephen Gorove, Major Legal Issues Arising from the Use of the Geostationary Orbit, 5 MICH. J. INT'L L. 3 (1984). Available at: <https://repository.law.umich.edu/mjil/vol5/iss1/1> //RD Debatedrills

Crucial to a proper analysis of this issue is an understanding of the concept of "appropriation." The term "appropriation" in law is used most frequently to signify "the taking of property for one's own or exclusive use with a sense of permanence." 12 The word" thus indicates something more than just casual use. The question then becomes whether the continued exclusive occupation by a geostationary satellite of the same physical area is a violation of the ban on national appropriation. While a state may certainly exercise exclusive control over a traditional object, such as a ship, or an aircraft, or a part of airspace, it is not clear that a satellite in geostationary orbit would be able to maintain its exact position and occupy the same area over a period of time. 13 Even if a position could be accurately maintained, and thus possibly constitute an "appropriation" within the meaning of article II, the satellite would have to be kept in that orbit with a "sense of permanence" and not on a temporary basis. It has been suggested that the keeping of a solar power satellite in geostationary orbit for a period of thirty years would not constitute appropriation. 14 In point of fact, thirty years would probably satisfy the "sense of permanence" requirement, unless the geostationary orbit were considered a natural resource as characterized by the International Telecommunication Convention of 1973 (ITC) 15 and as claimed by the equatorial countries. Authority exists to support the view that the ban on national appropriation of outer space does not relate to resources. 16 In view of this and the additional fact that solar energy is an inexhaustible and unlimited resource, its utilization for transmission to earth by satellites does not appear to fall under the prohibition of article II of the 1967 Treaty.

#### Their satellites definitely don’t meet the 30 year criteria

Ault 15 Alicia Ault, Smithsonian Magazine, 2-6-2015, "Ask Smithsonian: How Does a Satellite Stay Up?," <https://www.smithsonianmag.com/smithsonian-institution/ask-smithsonian-how-does-satellite-stay-180954165/> mvp

Most satellites are dropped in a range of up to 2,000 km above the earth. The satellites in the very low end of that range typically only stay up for a few weeks to a few months. They run into that friction and will basically melt, says McDowell.

#### Independently, satellite positioning is de facto appropriation, not appropriation proper – repeatedly upheld in application of space law

Matignon 19 [Louis de Gouyon Matignon, PhD in space law from Georgetown University, “ORBITAL SLOTS AND SPACE CONGESTION,” 06/03/19, *Space Legal Issues*, https://www.spacelegalissues.com/orbital-slots-and-space-congestion/, EA]

Near-Earth space is formed of different orbital layers. Terrestrial orbits are limited common resources and inherently repugnant to any appropriation: they are not property in the sense of law. Orbits and frequencies are res communis (a Latin term derived from Roman law that preceded today’s concepts of the commons and common heritage of mankind; it has relevance in international law and common law). It’s the first-come, first-served principle that applies to orbital positioning, which without any formal acquisition of sovereignty, records a promptness behaviour to which it grants an exclusive grabbing effect of the space concerned. Geostationary orbit is a limited but permanent resource: this de facto appropriation by the first-comers – the developed countries – of the orbit and the frequencies is protected by Space Law and the International Telecommunications Law. The challenge by developing countries of grabbing these resources is therefore unjustified on the basis of existing law. Denying new entrants geostationary-access or making access more difficult does not constitute appropriation; it simply results from the traditional system of distribution of access rights. The practice of developed States is based on free access and priority given to the first satellites placed in geostationary orbit.

#### Precision comes first and link turns predictable limits – the resolution is the only predictable stasis point for dividing ground—any deviation justifies the aff arbitrarily jettisoning words in the resolution at their whim which decks negative ground and preparation because the aff is no longer bounded.

#### Predictable limits—including satellite slots offers huge explosion in the topic since they get permutations of different satellite systems – LEO MEO and GEO, plus different companies, plus sizes of constellations, et cetera. Letting temporary occupation be appropriation is a limits diaster - any aff about a single space ship, satellite, probe, or weapon would be T because they temporarily occupy space. Limits explodes neg prep burden and draws un-reciprocal lines of debate, where the aff is always ahead, turns their pragmatics offense

#### Drop the debater—Topicality is a voting issue that should be evaluated through competing interpretations – it tells the negative what they do and do not have to prepare for—there’s no way for the negative to know what constitutes a “reasonable interpretation” when we do prep – reasonability is arbitrary and causes a race to the bottom, proliferating abuse

#### Fairness and education are voters – debate’s a game, and fairness is necessary to determine the winner of the game, and education is the reason why schools fund debate.

#### No rvi— no warrant for why it turns theory, no warrant for education and allow us to debate the best type of from of definition of appropriation which still gives us policy education—no shouldn’t win if it not something—just in the way you drop a cp if you kick out of it it doesn’t mean youll win

## 2

#### Realist arguments justifying nuclear weapons rely on gender dichotomies of self/other, inside/outside, and protector/protected

Duncanson and Eschle, 08

(Claire, PoliSci@Edinburgh, Catherine, PoliSci@Strathclyde, Gender and the Nuclear Weapons State: A Feminist Critique of the UK Government’s White Paper on Trident New Political Science, Volume 30, Number 4, December 2008)

Feminists in IR problematize the Realist approach to security on several grounds. Most obviously, they question why military threats from other states (or, more recently, from terrorist groups) are considered more important and immediate than the threat to human life posed by poverty, HIV/AIDS, environmental destruction or domestic abuse, all of which are claimed to disproportionately affect women. As a corollary, they challenge the Realist reliance on destructive military technology, insisting that welfare budgets do more to provide genuine security for women than increased defence spending.46 Feminists also seek to undermine the view that security is something which can be possessed or guaranteed by the state. Instead, they have urged us to understand security as a process, immanent in our relationships with others, and always partial, elusive, and contested. Conceived in this way, it must involve subjects—including women—in the provision of their own security.47 Two gendered aspects of Realist conceptions of security are particularly important for our purposes. First, Realists correlate security with invulnerability, invincibility and impregnability. This is strongly evident in the White Paper. It is claimed, for example, that: The rationale for continuous deterrent patrolling (which the UK has maintained since 1969) . . . is that the submarine on patrol is invulnerable to an attack. For example, we are confident that our SSBNs [Ballistic Missile Submarines] on deterrent patrol have remained completely undetected by a hostile or potentially hostile state. This means we have an assured nuclear deterrent available at all times.48 As Susannah Radstone has argued, however, invulnerability is an unachievable fantasy with obviously gendered connotations. It is the female body that is penetrated and impregnated while the male body remains, or ought to remain, intact and impermeable.49 Moreover, as argued above, nuclear technologies do not operate in a social vacuum. They are created and operated by humans and, as such, there can be no guarantees of infallibility. Indeed, the world may be decidedly less secure when submarines armed with nuclear missiles are continuously on patrol, but the emphasis in the White Paper on protection through superior technology makes this possibility unthinkable. Second, and perhaps more important, Realist views of security cast the state and its military wing as “protector” and civilians within the state as “protected,” a dichotomy which is profoundly gendered. Judith Hicks Stiehm, for instance, highlights the historical association of the protector role with men and the protected role with women; further, she claims that the protector role gains meaning and status precisely through its privileging over those who are feminised as vulnerable.50 As Iris Marion Young put it more recently: The role of the masculine protector puts those protected, paradigmatically women and children, in a subordinate position of dependence and obedience. To the extent that citizens of a democratic state allow their leaders to adopt a stance of protectors toward them, these citizens come to occupy a subordinate status like that of women in the patriarchal household. We are to accept a more authoritarian and paternalistic state power, which gets its support partly from the unity a threat produces and our gratitude for protection.51 Although recent years have seen the increasing integration of women into the armed forces in many developed states, the resistance to this process and the anomalies to which it gives rise demonstrate for many feminists that this gendering of roles around protection still runs deep.52 Furthermore, the gendered protector/protected dichotomy still works in symbolic terms. Thus discourses of state protection remain saturated with constructions of “masculine autonomy (freedom, control, heroics) and feminine dependency (passivity, vulnerability, woman as adored but also despised).”53 Moreover, feminists and others have pointed out that security discourse involves an enforced linkage between the protector and protected in the face of an external threat. For Stiehm this functions to mask the fact that the biggest danger to the protected may actually not come from outside the state but from the hypermasculinised protectors themselves.54 More recent post-structuralist-influenced work has made this relationship between the state and an external threat in Realist thought, or between state identity and “the Other,” central to their analyses. Although “the Other” may seem radically different from “us,” for poststructuralists, it is our understanding of the Other which in part constitutes the self.55 As feminists then point out, the self–other dichotomy frequently has gendered, as well as sexualised and racialised, dimensions. That the Other is frequently feminised, serving to underpin a masculine or hyper-masculine response, can be seen in examples ranging from colonial conceptions of virgin territories populated by compliant, exotic populations, to the treatment of prisoners at Abu Ghraib.56 Alternatively, “the Other” may be portrayed as having a deficient, gross masculinity in contrast to the rationality and restraint of “ourselves.”57 Thus different kinds of masculinities may be mobilised in security discourses, serving to differentiate a particular state government in the eyes of its population from its enemies and to legitimate its protector role. The identity of the UK state as Protector comes through strongly in the White Paper. Blair’s foreword opens with the statement that “The primary responsibility of any government is to ensure the safety and security of its citizens”58 and this is echoed throughout the document with numerous references to responsibility and specifically “responsibilities to protect the current and future citizens of the UK.”59 As well as establishing a gendered binary between the masculine, strong protector and the feminised, vulnerable population, this serves to delegitimize any opposition to nuclear weapons. Disarmament strategies become irresponsible and “imprudent,”60 lacking in crucial masculine-associated traits. It is in this way that challenges to the nuclear-protector role are positioned as emasculating, rendering the British state not only incapable of protecting its citizens but at risk of losing its independence and leadership status. In terms of an implied contrast to an external, threatening “Other,” the White Paper relies heavily on axioms about nuclear weapons “deterring blackmail and acts of aggression” from opponents,61 thus constructing a deceitful and coercive enemy which wields its nuclear weapons in a fundamentally different and less responsible way than the UK. There is considerable uncertainly and ambiguity, however, about who the enemy Other actually is. Indeed, no specific aggressor can be named, as the White Paper acknowledges: “Currently no state has both intent to threaten our vital interests and the capability to do so with nuclear weapons.”62 Given this rather glaring absence, the White Paper falls back on a strongly Realist emphasis on the dangers posed by the uncertainty of an anarchical international system, in which no one can ever be fully trusted. The section on “the policy context” for the Trident decision is particularly interesting here.We are told that “proliferation risks remain,”63 that the number of states with nuclear weapons continues to increase, and that existing nuclear arsenals are being modernised. The White Paper then refers readers to a box on the next page for “more details,” yet here we find no evidence of specific threats but rather information on all nuclear weapons states: those recognised by the Non- Proliferation Treaty (the US, Russia, France and China) and “other states” (India, Pakistan, North Korea and Israel). This is reinforced in a subsequent discussion entitled “re-emergence of a major nuclear threat” which hints at the possibility of NATO allies in the future “put[ting] us under threat.”64 There is no consideration of how likely (or not) this possibility may be. In short, the White Paper is forced to rely on decontextualized and rather tenuous generalisations about all states as potential enemy Others in order to justify Trident renewal—regardless of their intent or capability, or our relationship to them.

#### The aff’s drive to prevent extinction is a form of masculine survivalism where gendered bodies become the unwilling tools to sustain humanity. You should refuse their obsession with patriarchal reproduction.

Mitchell 15

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The reproduction of survival/ the survival of reproduction

Extinction is almost always understood against the horizon of survival and the imperative to sustain it – at least for life forms deemed to be of value to humans. In many cases, this imperative takes the form of deliberate strategies for enforcing existence. Donna Haraway’s influential book When Species Meet devotes considerable attention to the logics, practices and politics of Species Survival Plans. These plans monitor and enforce reproduction amongst ‘endangered’ species, not least by collecting data on populations, genetic profiles and genetic materials to enable selective breeding. This strategy assumes that all organisms can, should, and can be made to exercise their reproductive capacities in order to resist extinction, and it actively mobilizes members of ‘endangered species’ into this project. In so doing, it helps to entrench norms regarding gender, sexuality and reproductive labour that are deeply entrenched in modern, Western human cultures. Attention to these programmes highlights an important way in which extinction is gendered in dominant scientific and policy frameworks. Specifically, strategic breeding programmes share in the belief that reproduction is an imperative for those capable of reproducing if ‘the species’ is at risk’. This belief is directly related to Western norms of the reproductive imperative for women. Indeed, Haraway points out that it is precisely “‘woman’s’ putative self-defining responsibility to ‘the species’ as this singular and typological female is reduced to her reproductive function”. In a similar sense, within SSPs and other strategies of enforced survival, entire life forms are reduced to their reproductive capacities. Moreover, programmes of enforced survival can, in the context of sexual reproduction, disproportionately burden female organisms with the task of avoiding extinction. This logic is particularly fraught in discussions of the possibility of human extinction, in which female fertility (captured in the standard policy language of ‘births per woman’) is framed simultaneously as a threat to survival, and the only hope for escaping extinction (see, for instance, Alan Weisman’s comments on this). In these ways, the securitization of survival entrenches the intersectional categories of gender, species and race discussed above. Dominant discourses of extinction and conservation also entrench and privilege sexual reproduction, in ways that entrench heteronormative assumptions and norms. This is reflected in the way that the subjects of extinction and conservation are framed. The standard object of conservation is the biological ‘species’, a term which is defined by the ability of organisms to reproduce sexually. As Myra Hird has pointed out, this conception of ‘species’ makes it appear as if sexual reproduction is the ‘best’ means of sustaining the existence of a life form. However, Hird’s work demonstrates that Earthly life forms actually engage in myriad forms of reproduction, from the free exchange of DNA between bacteria to the hermaphroditic practices of some fish. The upshot of these arguments is that Earthly life is sustained through a huge variety of reproductive activities that do not conform to biological understandings of life processes or species. Crucially, Hird argues that there is no necessary hierarchy between forms of reproduction. In Darwinian terms, all species that manage to survive are equally successful. However, by conflating survival with sexual reproduction, existing discourses of extinction embed hetero-normative frameworks that devalue other forms of reproduction. They also reduce reproduction to the imperative to survive, ignoring the myriad cultural, political, aesthetic, sensual and other dimensions of reproduction.

#### The 1ac’s approach to space is apocalyptically neutral, engendering the biopolitical production of life and death – feminist geopolitics is key

Klinger 19 [Julie Michelle Klinger (PhD in Geography @ UC Berkeley, Assistant Professor @ BU), 2019, “Environmental Geopolitics and Outer Space,” Geopolitics, DOI: 10.1080/14650045.2019.1590340]

Smith’s (1990) thesis on the production of nature, from which environmental geopolitics drew insights, holds that nature is produced through human labor rather than pregiven. The use of outer space is enfolded in this dialectical relationship between geopolitics and the environment through power-laden practices that co-produce society and outer space (Beery 2011, 2016a; Dickens and Ormrod 2016; Dunnett et al. 2017). Indeed, the multibillion dollar investments in satellite instrumentation intended to generate greater “certainty” about a changing climate have been critiqued by scholars positing that a comparable investment in developing alternatives to fossil fuels would do much more social and environmental good (Litfin 1997). A critical attention to state and imperial power, as exercised through and in relation to the environment, distinguishes environmental geopolitics from classical geopolitical concerns with the maintenance and expansion of national power. Feminist Geopolitics The production of space is always an environmental process, which entails geographical questions of justice, access, risk, and vulnerability. Feminist geopoliticians critique both conventional and critical geopolitics as disembodied, noting that “critical geopolitics decentres the nation-state, but in its quest to destabilize the normative, it rarely engages transformative or embodied ways of knowing and seeing” (Ó Tuathail et al. 2010, 317). The perception of outer space as unthinkably “big” has perhaps undermined greater geopolitical reasoning of outer space and the environment in relation to the putatively “little” things such as embodied experience in and in relation to human action in outer space.2 This follows on a practice, long critiqued by ecofeminist scholars, of erasing the local in placeless formulations of the global (Haraway 1988; Litfin 1997; Tsing 2005). By challenging conventional scalar divisions (Christian, Dowler, and Cuomo 2016; Hyndman 2001; Sharp 2011), and connecting seemingly disparate people, places, and events, a feminist geopolitical approach reveals the connections across distance, difference, and various operations of power as they are materially manifested and lived (Dowler and Sharp 2001; Fluri 2009; Koopman 2011; Massaro and Williams 2013; Pain 2009; Secor 2001). In this configuration, the state is neither the unquestioned primary actor in global affairs nor “simply repressive and thus always and everywhere something to be resisted,” (Sharp 2011, 273; see also: Smith 2011; Harker 2011). A feminist geopolitical analysis of human engagement with outer space thus does not aspire to the ‘imperialist pretense’ of supplanting all other forms of analysis (Dixon 2015), in this case through a dismissal of classical or critical geopolitics, rather it views different schools of thought as useful for illuminating how diverse actors and institutions think and act in relation to outer space. Hyndman’s (2001) formulation of feminist geopolitics provides analytical purchase on the environmental geopolitics of outer space because it is concerned with “examining politics at scales other than that of the nation-state; by challenging the public/private divide at a global scale; and by analyzing the politics of mobility,” calling attention to the specific arrangements of capital, infrastructure, and raced and gendered vulnerability in the pursuit of greater engagement with outer space. Thus feminist geopolitics enables a “both/and” approach to the environment and outer space, by examining the actions of empowered actors in the production of outer space, while also interrogating the interests vested in the perpetuation of narrow, disembodied definitions of the environment in relation to outer space. The point is to identify structures and instances of injustice so that they can be remedied while shifting the paradigm from one characterized by conflict in the name of competitive national security regimes to one focused on peace-making and bodily security. Hence, this approach can account for the material, discursive, ideological, and lived spaces and practices that produce not only the environments of Earth and space but also our ongoing attempts to understand them. Outer Space as an Environment Defining the outer space environment can take on mind-bending complexity in the attempt to reconcile infinite distances with quotidian lived experience. It has proven challenging enough, as Hecht (2018, 112 emphasis original) noted, to “hold the planet and a place on the planet on the same analytic plane.” But just as neither place nor planet make sense without the other, so it is with Earth and space. We define the outer space environment relationally – in relation to Earth, to the anthropos, to our imagined absence, or in relation to human visions of possibility and peril. Relational definitions of the outer space environment invariably draw on relational geographies across Earthly environments, which, following the feminist geopolitical approach, reveals how the perhaps unexpected connections between people, places, and power produce outer space environments on Earth and in space. Environmental justice shares this epistemological orientation. The premise of environmental justice is that the rights of those who suffer environmental harm “have been systematically usurped by more powerful social actors, and that ‘justice’ resides in the return of these rights” (Capek 1993, 7). For the environmental justice framework to help us make sense of outer space, we must not only understand outer space as an environment, but also think through how human engagement with outer space constitutes environments in which (in)justice can occur. Outer space environments are mutually transformed with human society when we encounter them. Whether people and machines have altered a particular interplanetary landscape (Gorman 2005) or observed the far greater number of sites that are unlikely to be visited by humans or robots in the future (Vertesi 2015), coming to know new space environments ignites human imaginations with new possibilities. New imaginaries have material consequences, informing policy, practice, and investment choices (Kearnes and Thom 2017; Klinger 2017; Messeri 2016). Material consequences are mediated through the technological capacity to deal with dynamics of distance, temperature, radiation, and institutional capacity to orchestrate ongoing engagements with outer space. In the broadest sense, the environment of outer space encompasses everything that was and ever will be (Hawking and Penrose 1996). Perhaps because of a certain epistemological agoraphobia that inhibits geographical engagements with questions of infinity, the political economic effects of the popularization of these theories over the course of the twentieth century has received limited attention (Giudice 2012; Riordan 2001), and this totalizing scale has been left outside of most studies of human-environment dynamics. Using environmental geopolitics, it is possible to build our epistemologies out to the totality without reproducing earlier religious-themed schemata that placed the heavens utterly and ineffably “beyond.” Put simply, outer space is a global environment insofar as it is the environment in which Earth resides. By thinking of outer space as Earth’s environment, much as we might think of the space within our atmosphere as “our” environment, this “nested” approach replicates problematic conceptions of the environment as a separate thing outside of the self. Our planet is of the cosmos, an accretion of matter floating through space that consolidated over billions of years and now hosts its own diverse environments of which we are. Outer space as a global environment is dynamic, as our planet spins on its axis at a constant speed while orbiting the sun at thirty kilometers per second along a trajectory that is nine hundred and forty six million kilometers in circumference. Anything that enters this trajectory at a given point in space and time can also enter the global environment. Large objects such as asteroids and space weather phenomena, such as solar flares, capture more popular attention because they may spectacularly damage orbital and terrestrial infrastructure. Less well known are the daily showers of microscopic space dust that nourishes the microbial life that regulates global oceanic and atmospheric environments (Baker 2002; Helmreich 2009). Anthropocene and Outer Space Even with the expansion of Anthropocene literature, efforts to think at the scale of the planetary (Spivak 2003) draw our attention “inward and downward” (Olson and Messeri 2015), to the regions of the cosmos where human activity is concentrated or to our own solar system (Dickens and Ormrod 2016; Praet and Salazar 2017; Salazar 2017a). Noting this tendency, Olson and Messeri (2015), building on Agrawal (2005), proposed a “heliosystemic environmentality” to describe how our concept of the environment centers on the sun and its crucial role in sustaining life on Earth. Thinking of the environment as something on the scale of our solar system amplifies the significance of environmental changes on Earth. As Salazar (2017a) has observed, the loss of Earth’s polar ice caps is made even more dramatic when one considers that they are not only important to stabilizing Earth’s orbit, they are also likely unique in our solar system. Anthropocene concerns with global environments have, in practice, delineated inner and outer environments, where the “outer” environments consist of the spaces beyond the atmosphere and beneath the lithosphere. This brackets what tends to count as the human environment to the space between the surface of the Earth and the limits of our atmosphere (Olson and Messeri 2015), although indigenous concepts of the anthropocene have more nuanced conceptions of boundaries (Inoue, Aoki, and Moreira 2017). But much of climate change, everyday life, and localized environmental experience unfolds within this space, hence our anthropocentric “surface bias” (Bebbington and Bury 2013) when defining what, and where, constitutes the environment. Life, Death, and Boundaries The atmosphere serves as a boundary layer between life and death, the biosphere and the beyond. Most of life as we know it can only live within this layer between the ocean floor and the atmosphere, indicating that definitions of the environment tend to be synonymous with life, although the growing research on “extremophiles” living beneath glaciers or on hot ocean vents animates the search for similar sorts of life on other moons and planets (Hashimoto and Kunieda 2017; Helmreich 2009; Rothschild 2007; Salazar 2017b; Vaidyanathan 2017). As fears over the precarity of life on Earth become increasingly salient within the Anthropocene (Pain and Smith 2008; Swyngedouw 2013), the search not only for life but also for habitable exo-planets represents an extension of environmental sensibilities to other parts of our solar system and galaxy (Helmreich 2009; Olson 2018; Segura et al. 2005). This is driven by multiple motivations: from scientific curiosity, to the pursuit of profits, to an apocalyptic sensibility looking for an escape from an Earthly doomsday scenario (Dittmer and Sturm 2010; O’Neill 2000; Walker 2018). Each of these approaches to the question of life in our cosmos informs different material practices in Earthly environments. The question of life in relation to outer space takes three primary forms: the search for new forms of life; experiments with living in outer space, and mitigating threats of an uncertain future on Earth. The latter compels humans to fantasize about colonizing the cosmos in order to survive. This abiding concern with the future informs a series of “anticipatory practices,” intended to provide relief to some – not necessarily all – lives (Anderson 2010). Building on this, environmental geopolitics of outer space are therefore about life and death. This is not simply a matter of “making live” and “letting die” but about rethinking environments in which life and death are both possible and predictable (Foucault 2003). The public declarations of Mars One activists’ willingness to die in space are a display of human volition to approach a deadly environment in order to make it livable. Through their sacrifice, they hope to create extraterrestrial spaces where life and death are rendered more predictable (Greene 2014; Jamieson 2016). In the process of remaking environments in outer space, understandings of the human position shift in relation to Earthly environments. Most critically, the dominant trend seems to be rethinking Earth as something that can be “left behind” (Bianco 2018) in the relentless pursuit of a “somewhere else” that looks like Eden (Messeri 2017). Thinking concretely about specific elements of our biosphere dissolves the boundary between life and “the environment” on Earth contrasted to the deathliness of outer space. For example, microbial and chemical processes such as photosynthesis illustrate the elegant links between the cosmos and life on Earth. The plants that sustain a breathable atmosphere and an abundant food supply are “communicating and mediating between the cosmic and the mineral, the sky and the ground, taking up and transforming energies and materials through their processes” (Gabrys 2016, 13). Although the solar radiation that nourishes life on Earth has extreme origins in a ball of plasma over a hundred times larger than Earth, with a surface temperature of over five thousand degrees Celsius, its interactions with the biosphere in many parts of our world are celebrated as life giving, nourishing, and pleasant. Life and environment, Earth and outer space, are linked in a long series of chemical reactions and flows of electromagnetic radiation. This moves us away from “environment as container” and toward a milieu from which life is inseparable (Canguilhelm 2001). Indeed, transporting humans beyond the atmosphere requires engineering living milieus within closely contained spaces (Aronowsky 2017; Battaglia 2017). Similarly, dreams of interplanetary civilization involve creating Earthly milieus on other worlds (Kearnes and Thom 2017). In contrast to most human-environment relations on Earth, in outer space great lengths are taken to close the human body off from the outer space environment within the world of the space suit, ship, and station. While this closure may be possible down to the molecular scale, it is not possible at the atomic level, as cosmic radiation penetrates space station and space suit walls to alter the DNA of astronauts taken outside of the protective membrane of our atmosphere (Dietz et al. 2013). The “extreme” serves as a uniting principle for social science research in outer space and in analog environments on Earth, such as the deep ocean or Antarctica (Olson 2018; Praet and Salazar 2017). This concept “shapes an analytic of limits and ever-opening horizons – epistemological and physical – provoking new understandings of humanness, environment, temporality, and of inter-species life as we think we understand it, here on Earth” (Battaglia, Valentine, and Olson 2015, 252). If geopolitics is about how power is situated across “a spectrum of scales of social life” (Hyndman 2009), then environmental geopolitics is about how life and living are mediated by power relations exercised through our physical environment. An environmental geopolitics of outer space simply ceases to take for granted the spaces beyond our atmosphere as we consider the complexity of human-environment relations. Like global environments, outer space is perhaps not so much extremely distant as it is startlingly immediate. Outer space is big but it is also always experienced locally. Local experiences of the outer space environment take a variety of forms beyond those astronauts who have stepped out of the airlock (Jones 2006): from the sixty tonnes of cosmic dust that showers Earth daily (Gardner et al. 2014), accumulating in stratospheric clouds and coating rooftops and sidewalks (Genge et al. 2017), to the mediated experience of exploring different other-worldly environs through robot proxies (Vertesi 2015), to the individualized ‘uplinking and downlinking’ (Thrift 2005) that connects people and machines to satellites in Earth’s orbits for a multitude of purposes. It is from this ‘yoking’ (Abbott 1995; Moore 2008) of locality-andtotality that we can discern the environmental geopolitics of outer space on Earth and in space. Environmental Geopolitics of Outer Space on Earth On Earth, the environmental geopolitics of outer space are inseparable from questions of environmental justice. Environmental (in)justice unfolds across multiple scales through concrete processes: localized and stratospheric emissions from space launches (Carlsen, Kenesova, and Batyrbekova 2007; Jones, Bekki, and Pyle 1995), the placement of outer space related infrastructure in national and global peripheries (Gorman 2007; Mitchell 2017; Redfield 2001), and the use of such infrastructure to advance or thwart environmental destruction (Da Costa 2001; Guzmán 2013; Parks 2012). Human engagement with outer space enlists industrial economies, global networks of infrastructure and expertise, and the generation and control of information. All of these activities take place in specific sites and are subject to ongoing transformations in territorial governance practices. By locating infrastructures that are securitized, dangerous, and environmentally toxic in remote areas, the state or empire accomplishes two things. It consolidates power in far-flung territories while mitigating against liabilities and security threats that might arise from placing launch infrastructures closer to the metropole. In order to reduce environmental impacts, adequate resources, personnel, and expertise need to be assigned to the task of monitoring and mitigating the regional fallout of rocket launches (Hall et al. 2014). This may not be the case if the site in question has been deemed sacrificable by those with territorial control. Launches and Their Infrastructures Reaching outer space requires Earthly infrastructure, which means that space launches have concrete footprints that change according to developments in launch technologies. The placement of outer space related infrastructure on Earth is a question of environmental (in)justice. Which sites are chosen, who is expropriated, and which environments are impacted is subject to strategic geopolitical calculations, which, more often than not, employ classical geopolitical reasoning (Hickman and Dolman 2002; Ingold 2006; Meira Filho, Guimarães Fortes, and Barcelos 2014; NDRI 2006). Launch sites are tightly controlled to reduce the risk of interference or failure, therefore situating launch sites in remote areas is often explained in terms of safety and security (Zapata and Murray 2008). No doubt this is important: rockets are composed of many tonnes of material and combustive fuel, so they must be launched in places where damage from routine as well as potentially catastrophic explosions can be contained. For humans to reach “the final frontier,” they must first find a frontier space on Earth that can be made into an empty space in which controlled explosions can be routine. Frontiers are seldom as empty as those aiming to conquer them would claim. Where they are not populated by people, they are filled with other sorts of meanings and life forms (Klinger 2017; Tsing 2005). Potential launch sites and testing ranges deemed by government authorities to be simultaneously remote, safe, and suitable to contain the risks of rocket launch must first be made empty of people, with prior land use regimes or territorial claims pushed beyond designated buffer zones (Gorman 2007; Mitchell 2017). Hence the placement of space infrastructure follows colonial geographies of extraction, sacrifice, and risk (Mitchell 2017; Redfield 2001). As Gorman (2007) put it: “because of their distance from the metropole, these places lend themselves to hosting prisons, detention camps, military installations, nuclear weapons, and nuclear waste. All of these establishments, including rocket ranges, have inspired reactions of protest.” These so-called ‘peripheral’ spaces are nevertheless central to their inhabitants and their neighbors, who question the logic of extraglobal conquest in the face of unresolved Earthly injustices. Consider, for example, the case of the launch site in Alcântara, Brazil, which has been well documented by Araújo and Filho (2006) and Mitchell (2017). Through a close examination of local, national, and international politics, these authors document how the government’s racialized approach to the subsistence communities displaced by space infrastructure deepened structural inequalities. Grassroots opposition to the launch site grew not out of an a priori ideological opposition of poor people to national progress in outer space, as some officials alleged, but rather resulted from the failure to account for the food insecurity generated by state resettlement projects. The resettlement schemes were themselves misinformed by impoverished notions of local livelihoods. Local claims against the deprivations caused by statesponsored space practices have deepened schisms between the military and civilian space programs at the federal government level. Through the lens of classical geopolitics, these structural inequalities scarcely register, with the result that the ‘crawling’ progress of Brazil’s space program is pathologized as poor management practices symptomatic of an inadequately implemented national development vision (Amaral 2010). Critical geopolitics helps deconstruct the nationalist performativity of such endeavors by considering the political and economic value placed on the spectacle of spaceflight (Boczkowska 2017; Macdonald 2008, 2010; Sage 2016). Feminist geopolitics draws our attention to the racialized and gendered dispossession advanced by the state, through the construction of space infrastructure and exercised through access to land. The fact that environmental and public health impacts were only considered by the authorities after years of mobilization by Black social movements, religious communities, and scholars highlights the ways in which inattention to the local in the pursuit of space power perpetuates environmental injustice, which in turn interrupts national plans for space progress. Rocket launches affect local and global environments through the construction of infrastructure, the exposure of local environments to toxic residues, and the dispersal of pollutants in land, air, and sea. Rockets are the only source of direct anthropogenic emissions sources in the stratosphere. Ozone-depleting substances (ODS) such as nitrous oxide, hydrogen chlorine, and aluminum oxide are emitted by rockets, and can destroy 105 ozone molecules before degrading (Voigt et al. 2013). The ozone layer prevents cancer and cataract-causing ultraviolet-b waves from reaching the Earth. As of 2013, rocket launches accounted for less than 1% of ODS emissions. As other ODS are phased out under the Montreal Protocol and the frequency of lower cost space launches increases, the proportion and quantity is likely to increase (Durrieu and Nelson 2013; Ross et al. 2009). Although affluent economies in the northern hemisphere are responsible for most ODS emissions (Polvani 2011; Rousseaux et al. 1999), the geography of exposure disproportionately affects an overall higher population in remote regions and in the southern hemisphere (Norval et al. 2011; Robinson and Erickson 2015; Thompson et al. 2011) because ozone depletion is most serious in regions where high altitude stratospheric clouds are most likely to form: above the polar regions and major mountain ranges (Carslaw et al. 1998; Perlwitz et al. 2008). This is an example of environmental injustice on a global scale, where the global south bears the environmental burden of actions predominately taken in the global north, rocket launches included. In the process, global power relations are reinscribed through the uneven distribution of harm to peripheral and southern bodies, mediated in this case through the redistribution of gases in the stratosphere that increase exposure to solar radiation. Coming closer to Earth, environmental geopolitics of outer space are manifest in the dispersal of particulate matter into ecosystems surrounding active launch sites. This is more than a strictly local environmental concern, because which spaces are subject to the hazards of launch sites involves careful calculations weighing financial cost, state power, and multifarious territorial interests. With each launch, surrounding areas are showered with toxins, heavy metals, and acids over a distance that varies widely with wind, weather, and precipitation patterns at the moment of lift-off.3 The most researched of these pollutants are hydrogen chloride, aluminum oxide, and various aerosolized heavy metals. Release of these pollutants from rocket launches results in localized regional acid rain (Madsen 1981), plant death, fish kills, and failed seed germination of native plants in launch sites (Marion, Black, and Zedler 1989; Schmalzer et al. 1992). These effects, and research on them, are mostly concentrated within one kilometer of the launch site. But they have been recorded several kilometers away under certain weather conditions (Schmalzer et al. 1998). Recent studies on the concentration of trace elements in wildlife in areas near NASA launch activities in Florida, USA, found that more than half of the adults and juvenile alligators had “greater than toxic levels” of trace elements in their liver (Horai et al. 2014). Both the subject, and the vague statement of findings, highlights the lack of research into the impacts on downstream human and non-human communities. In contrast to the precautions taken to protect workers in buildings adjacent to facilities where these technologies are developed (Bolch et al. 1990; Chrostowski, Gan, and Campbell 2010), much less consideration is given to communities within the dynamic pollutant shadow of rocket launches. In Kazakhstan, Russia, and China, researchers have begun examining the effects of the highly toxic liquid propellant, unsymmetrical dimethylhydrazine (UDMH), which has been in use since the dawn of the space age. It has noted carcinogenic, mutagenic, convulsant, teratogenic, and embryotoxic effects (Carlsen, Kenesova, and Batyrbekova 2007), and it has been found to cause DNA damage and chromosomal aberrations in rodents living near the Baikonur cosmodrome in Kazakhstan (Kolumbayeva et al. 2014). Despite these known hazards, methods to detect UDMH at the trace concentrations at which toxic effects begin to manifest in humans do not yet exist (Kenessov, Bakaikina, and Ormanbekovna 2015), meaning that there is no knowledge of how this circulates in the environment, bioaccumulates up the food chain, or could potentially be sequestered through soil or plant filtration. The lack of technology or methodology to adequately track the dispersal of hazardous pollutants that have been used for decades in the surrounding environment illustrates another aspect of environmental injustice: the preference on the part of political and economic elites to create spaces of waste rather than allocate adequate resources to maintain safe and non-toxic environments.4 The hyper-local politics of basic livelihood security shape long-term access to outer space and space geopolitics at multiple scales. Attending to the local matters is important, not just because it sheds light on broader geopolitical processes, but because failing to do so leaves the substantive matters of human engagement with outer space entirely overlooked, at best. At worst, ignoring local environmental conditions recasts them as places to be “left behind,” casualties in a Darwinian race to the cosmos in which the poor have no place. Attending to the environmental geopolitics of outer space on Earth shows the co-production of Earth and space. Earthly environments and social relations are remade in our evolving relationship with outer space and reconceived alongside evolving deliberations on the prospects for human survival.

#### The impact is hypermasculine war-making. Claims of objectivity are patently flawed because they are based in gendered decision-making

Sjoberg 13

(Laura, total bae, associate professor of Political Science @ University of Florida, University of Chicago; Ph.D., University of Southern California School of International Relations; J.D. Boston College Law School, Gendering Global Conflict: Toward a Feminist Theory of War Chapter: “Relations International and War(s),” Gendered Lenses Look at War(s), googlebooks, JKS)

Feminist scholars have also interrogated the unitary nature of the state, pointing out that efforts to maximize the state's security interests often threaten the security of people inside the state. Specifically, as I discussed in the previous section, the state's most marginalized citizens are often made insecure by state security-seeking, making it clear that a state does not have a single interest in interstate interaction but many that conflict. J. Ann Tickner contends that "an explanation of the historical development of state sovereignty and state identities as they have evolved over time does indeed suggest deeply gendered constructions that have not included women on the same terms as men." This is because, according to Tickner:¶ From the time of their foundation, states have sought to control the right to define political identity. Since their legitimacy has constantly been threatened by the undermining power of subnational and transnational loyalties, states' survival and success have depended on the creation and maintenance of legitimating national identities; often these identities have depended on the manipulation of gendered representation. . . . Drawing on metaphors that evoke matrimonial and familial relations, the nation has been portrayed as both male and female. . . . The sense of community implicit in these family metaphors is deeply gendered in ways that not only legitimate foreign policy practices but also reinforce inequalities between men and women.”¶  ¶ Using these gendered metaphors, the state can, while shoring up its "national interest," both threaten the interest of marginalized citizens inside it and reinforce power inequalities among its groups. Catherine MacKinnon has explained that the "state's structures and actions are driven by and institutionalize strategy based on an epistemic angle of vision" that can "distinguish public from private, naturalize dominance as difference, hide coercion beyond consent, and conceal politics beyond morality.” These structures require a certain standard of behavior from some members of the state,” while suppressing the voices of others altogether.”¶ With these tools, the state can appear unitary by suppressing its diversity and presenting one concept of national interest, autonomous of and not necessarily representative of its citizens. In this understanding, the sovereign state can be "an extension of the separation-minded realist man, also autonomous to various degrees from the diverse 'domestic' interests he-it allegedly exists to protect.” Additionally, states are complicit with gender subordination when they fail to intervene in domestic violence, perpetuate a heterosexist bias in education, exercise discrimination in welfare policies, and operate on patriarchal laws.” ¶ In this conception, the unitary state is a misleading and malignant construction. Two implications for the process of state interaction follow; states that interact often promote unrepresentative interests, and those unrepresentative interests exclude gender, racial, and cultural minorities. In this sense, states' elites often make wars (or fail to) "representing" a limited group or groups among their populations, while claiming full representativeness, effectively rendering a significant portion of their supposed "constituency" invisible in the process of interacting with other states. Empirically, this means that there are a number of levels of interstate interaction, many of which are omitted from process-based notions of dyadic war theorizing. Normatively, it suggests that our conceptions of how states interact (and the content of those interactions) are problematically skewed.¶ Rationality in Interaction This skew is particularly evident in the assumption of rationality." The rationality assumption implies that the knower/actor can separate himself/herself from the “other” in interactions with that other. Feminists have argued that knowledge is always perspectival and political; therefore, states and their leaders’ decisions about how to interact with others are not rational, but informed by their situational and political biases. In this view, the rationality assumption may be seen as at once itself a political bias and obscuring other political biases. As Naomi Scheman argues, perceived rational cost-beneﬁt analysis about war-making and war-fighting should “always be seen as especially problematical when... constructed only by those in positions of privilege... [which provide] only distorted views about the world.”78 In this view, rational calculation is not an objective, attainable, and desirable end, but a partial representation of both interest and actors’ representation of those interests. In this way, through gender lenses, rationality has been seen as importantly incomplete, leaving out signiﬁcant (if not the most significant) factors that go into decision-making.79 In addition to understanding the rationality assumption as partial (and therefore unrepresentative), feminist research has pointed out links between rationality and mascuIinism.8° As Karen Jones notes, advocates of rationality as a guide for interstate interactions“ assume: 1. Available... conceptions of rationality and reason represent genuinely human norms and ideals; 2. The list of norms and ideals contained within available conceptions of rationality and reason are sufficiently complete; and 3. The external normative functions assigned to reason and rationality are unproblematic.82 Looking through gender lenses shows problems with each of these assumptions. Feminists have argued that “the identity of the modern subject-in models of human nature, citizenship, the rational actor, the knowing subject, economic man, and political agency-is not gender-neutral but masculine (and typically European and heterosexua|).”83 This impacts not only how we see the rational subject, but how we predict and understand his decisions, at the state level as well as at the individual level. According to Margaret Atherton, the possibility of rationality has “been used in a disturbing fashion to mark a gender distinction. We have, for example, on the one hand, the man of reason, and, on the other, the woman of passion.”84 In rationality assumptions, traits associated with masculinity are normalized and traits associated with femininity are excluded. The impact is compounded because (masculinized) rationality and its (feminized) alternatives are not on equal playing ﬁelds. As a result, Karen Jones notes that “women’s assumed deficiency in rationality” has been used to exclude both women and knowledge associated with femininity from accepted views of the world.85 The alleged gender neutrality of rationality, then, “is often a covert form of privileging maleness”85 and omission of “what has traditionally counted as ‘feminine.’”87 Still, adding women and values associated with femininity to current concepts of rationality is unlikely to create a gender-neutral concept of rationality.88 This is because, epistemologically, the sovereign rational subject constructs artificial gendered boundaries between rationality and emotion, male and female, and knower and known.89 Among states, those boundaries are not benign. Instead, they breed competition and domination that inspire and foster war(s) and conﬂict(s).90 This competition frequently relies on contrasting the state’s own masculinity to the enemy’s (actual or perceived) femininity. This cycle of genderings is not a series of events but a social continuum. In these gendered relationships, as Zillah Eisenstein argues, “gender differentiation will be mobilized for war and peace,” especially moving forward into the age of an American empire focused on manliness.9‘ Feminists have long argued that competitions between hegemonic masculinities and subordinate masculinities play a role in causing war(s).92 Hidden beneath the assumed independence, rationality, and unity of state interaction leading to war are gendered interstate interactions that cause, constitute, and relate to war and wars. Feminist scholars have recognized the extent to which the preeminence of masculine values dominates (particularly conﬂictual) accounts of interstate interactions, wherein “rational” interactions often become “a self-reproducing discourse of fear, suspicion, anticipated violence, and violence” in which “force is used to checkmate force.”93 Interstate interactions leading to wars often show the gendered nature of war narratives, war logics, and war languages, which produce (and reproduce) gendered cycles of violence.

#### The alternative is to reject the aff in favor of an ontological revisionism that deconstructs the myth of the masculine western subject. This is a politics that destabilizes the masculine subject by revealing how its false universality underwrites gender violence globally

Youngs 04

(Gillian, Professor of Digital Economy at the University of Brighton, Feminist International Relations: a contradiction in terms? Or: why women and gender are essential to understanding the world ‘we’ live in\*, International Affairs, 80, pgs 77-80, JKS)

This discussion will demonstrate, in the ways outlined above, the depth and range of feminist perspectives on power—a prime concern of International Relations and indeed of the whole study of politics. It will illustrate the varied ways in which scholars using these perspectives study power in relation to gender, a nexus largely disregarded in mainstream approaches. From feminist positions, this lacuna marks out mainstream analyses as trapped in a narrow and superficial ontological and epistemological framework. A major part of the problem is the way in which the mainstream takes the appearance of a pre- dominantly male-constructed reality as a given, and thus as the beginning and end of investigation and knowledge-building. Feminism requires an ontological revisionism: a recognition that it is necessary to go behind the appearance and examine how differentiated and gendered power constructs the social relations that form that reality. ¶ While it may be empirically accurate to observe that historically and contemporaneously men have dominated the realms of international politics and ¶ economics, feminists argue that a full understanding of the nature of those realms must include understanding the intricate patterns of (gendered) inequalities that shape them. Mainstream International Relations, in accepting that because these realms appear to be predominantly man-made, there is no reason to ask how or why that is the case, stop short of taking account of gender. As long as those who adhere to this position continue to accept the sufficiency of the appearances and probe no further, then the ontological and epistemological limitations will continue to be reproduced. ¶ Early work in feminist International Relations in the 1980s had to address this problem directly by peeling back the masculinist surface of world politics to reveal its more complex gendered (and racialized) dynamics. Key scholars such as Cynthia Enloe focused on core International Relations issues of war, militarism and security, highlighting the dependence of these concepts on gender structures—e.g. dominant forms of the masculine (warrior) subject as protector/conqueror/exploiter of the feminine/feminized object/other—and thus the fundamental importance of subjecting them to gender analysis. In a series of works, including the early Bananas, beaches and bases: making feminist sense of international politics (1989), Enloe has addressed different aspects of the most overtly masculine realms of international relations, conflict and defence, to reveal their deeper gendered realities.3 This body of work has launched a powerful critique of the taboo that made women and gender most invisible, in theory and practice, where masculinity had its most extreme, defining (and violent) expression. Enloe’s research has provided one of the most comprehensive bodies of evidence for the ontological revisionism required of mainstream International Relations, especially in relation to its core concerns. ¶ When Enloe claimed that ‘gender makes the world go round’,4 she was in fact turning the abstract logic of malestream International Relations inside out. This abstract logic saw little need to take theoretical and analytical account of gender as a social force because in practical terms only one gender, the male, appeared to define International Relations. Ann Tickner has recently offered the reminder that this situation persists: ‘During the 1990s, women were admitted to most combat positions in the U.S. military, and the U.S. president appointed ¶ the first female secretary of state, but occupations in foreign and military policy- making in most states remain overwhelmingly male, and usually elite male.’5 ¶ Nearly a decade earlier, in her groundbreaking work Gender in International Relations: feminist perspectives on achieving global security,6 she had asked the kinds of questions that were foundational to early feminist International Relations: ‘Why is the subject matter of my discipline so distant from women’s lived experiences? Why have women been conspicuous only by their absence in the worlds of diplomacy and military and foreign policy-making?’ Tickner, like Enloe, has interrogated core issues in mainstream International Relations, such as security and peace, providing feminist bases for gendered understanding of issues that have defined it. Her reflection on what has happened since Gender in International Relations was published indicates the prominence of tensions between theory and practice. ‘We may have provided some answers to my questions as to why IR and foreign policymaking remain male-dominated; but breaking down the unequal gender hierarchies that perpetuate these androcentric biases remains a challenge.’7 ¶ The persistence of the overriding maleness of international relations in practice is part of the reason for the continued resistance and lack of responsiveness to the analytical relevance feminist International Relations claims. In other words, it is to some extent not surprising that feminist International Relations stands largely outside mainstream International Relations, because the concerns of the former, gender and women, continue to appear to be subsidiary to high politics and diplomacy. One has only to recall the limited attention to gender and women in the recent Afghanistan and Iraq crises to illustrate this point.8 So how have feminists tackled this problem? Necessarily, but problematically, by calling for a deeper level of ontological revisionism. I say problematically because, bearing in mind the limited success of the first kind discussed above, it can be anticipated that this deeper kind is likely to be even more challeng- ing for those in the mainstream camp. ¶ The second level of ontological revisionism required relates to critical understanding of why the appearance of international relations as predominantly a sphere of male influence and action continues to seem unproblematic from mainstream perspectives. This entails investigating masculinity itself: the nature of its subject position—including as reflected in the collective realm of politics— and the frameworks and hierarchies that structure its social relations, not only in relation to women but also in relation to men configured as (feminized) ‘others’ ¶ because of racial, colonial and other factors, including sexuality. Marysia Zalewski and Jane Parpart directly captured such an approach as ‘the “man” question in international relations’.9 I would like to suggest that for those sceptical about feminist International Relations, Zalewski’s introductory chapter, ‘From the “woman” question to the “man” question in International Relations’, offers an impressively transparent way in to its substantive terrain.10 Reflecting critically on the editors’ learning process in preparing the volume and working with its contributors, both men and women, Zalewski discusses the various modifications through which the title of the work had moved. These included at different stages the terms ‘women’, ‘masculinity’ and ‘feminism’, finally ending with ‘the “man” question’—signalling once again, I suggest, tensions between theory and practice, the difficulty of escaping the concrete dominance of the male subject position in the realm of international relations. ¶ The project’s starting point revealed a faith in the modernist commitment to the political importance of bringing women into the position of subjecthood. We implicitly accepted that women’s subjecthood could be exposed and revealed in the study and practice of international relations, hoping that this would also reveal the nature of male dominance and power. Posing the ‘man’ question instead reflects our diminishing belief that the exclusion of women can be remedied by converting them into subjects.11 ¶ Adding women appeared to have failed to ‘destabilize’ the field; so perhaps critically addressing its prime subject ‘man’ head-on could help to do so. ‘This leads us to ask questions about the roles of masculinity in the conduct of international relations and to question the accepted naturalness of the abundance of men in the theory and practice of international relations’ (emphasis added).12 ¶ The deeper level of ontological revisionism called for by feminist Inter- national Relations in this regard is as follows. Not only does it press beyond the appearance of international relations as a predominantly masculine terrain by including women in its analysis, it goes further to question the predominant masculinity itself and the accepted naturalness of its power and influence in collective (most significantly state) and individual forms.

## Case

#### Abstract debates about methods and research are valuable specifically in the context of gendered IR, even if they don’t immediately prescribe something material – roleplaying as policy makers feeds into the theory of the k

Sjoberg 11 (Laura Sjoberg is Assistant Professor of Political Science at the University of Florida, Looking Forward, Conceptualizing Feminist Security Studies, Politics and Gender, 2011, doi:10.1017/S1743923X11000420, JKS)

Along these lines, I have come to see the substance of Feminist Security Studies as a dialectical-hermeneutic argument, an approach that has implications for its process and its product. In this understanding, the purpose of doing research in Feminist Security Studies is to raise problems, not to solve them; to draw attention to a field of inquiry, rather than survey it fully; to provoke discussion, rather than serve as a systematic treatise. The conflicts and contestations both among feminists in Feminist Security Studies and between feminists and security that have come up in this conversation are not an outline of problems that need to be solved or divides that need to be crossed, healed, or closed. Instead, those debates, along with how they are handled and addressed, constitute Feminist Security Studies. Feminist Security Studies, then, neither needs to solve nor ignore either the fundamental differences among feminists or the dissonance between Feminist Security Studies and security studies as a discipline. Instead, Feminist Security Studies is defined not only by its fundamental contestabilities but also by its actual contestations. Feminist Security Studies is not the sum of the different approaches or the winner of the debate between them, but the narrative generated from their arguments, disagreements, and compromises.

#### 1) Collision risk is tiny

Wein 9 [Lawrence M. Wein, Professor & Senior Fellow at Stanford’s Center for International Security and Cooperation Jeffrey S. Skoll Professor of Management Science at Stanford University and Senior Fellow at Stanford’s Center for International Security and Cooperation, former DEC Leaders for Manufacturing Professor of Management Science at MIT, and Andrew M. Bradley, PhD-Institute for Computational and Mathematical Engineering at Stanford University, Space debris: Assessing risk and responsibility, Advances in Space Research 43 (2009) 1372–1390]

More importantly, while our numerical results mimic earlier results (Liou and Johnson, 2005; Walker and Martin, 2004) that stressed the importance of postmission deorbiting, we do not necessarily agree with the claim that the only way to prevent future problems is to remove existing large intacts from space (Liou and Johnson, 2006, 2008). The divergence between our views and those in Liou and Johnson (2006, 2008) is perhaps due to the different performance metrics used. The root causes for alarm in Liou and Johnson (2006, 2008) appear to be the growth rate of fragments and the small increase in the rate of catastrophic collisions over the next 200 years (Liou and Johnson, 2008, Fig. 2). However, the great majority of catastrophic collisions in the SOI do not involve operational spacecraft, and are hazardous only in the sense that the fragments generated from such a collision could subsequently damage or destroy operational spacecraft. Therefore, we introduced the notion of the lifetime risk of an operational spacecraft as the primary performance metric. Our model predicts that the lifetime risk is <5x10^-4 [less than .0005%] over the next two centuries, and always stays <10^-3 [less than .001%] than if there is very high (>98%) spacecraft deorbiting compliance. These risks appear to be low relative to the immense cost and considerable technological uncertainty involved in removing large objects from space, are dwarfed by the ~20% historical mission-impacting (but not necessarily mission-ending) failure rate of spacecraft (Frost and Sullivan, 2004), and could be overestimated if improved traffic management techniques lower future collision risks (Johnson, 2004). Hence, the need to bring large objects down from space does not appear to be as clear cut as suggested in Liou and Johnson (2006, 2008). Nonetheless, our model does not incorporate the possibility of intentional catastrophic collisions (ASAT tests, space wars) that could conceivably occur in the future. In addition, Fig. 5 considers only catastrophic collisions, whereas noncatastrophic intact-fragment collisions could easily disable an operational spacecraft. If the operational lifetime risk is modified to include noncatastrophic collisions with fragments >= 10cm, then the sustainable risk rises by ~50%: it increases from 2.19x10^-2 [.0219%] to 3.09x10^-2 in the base case, and increases from 4.91x10^-4 [.000491%] to 7.94x10^-4 in the full compliance case. Moreover, if fragments >= 1 cm (rather than >= 10 cm) are harmful to spacecraft (Johnson, 2004), then we (as well as other researchers) could be underestimating the risk.

#### 2) Space debris creates existential deterrence and a taboo

Bowen 18 [(Bleddyn, lecturer in International Relations at the University of Leicester) “The Art of Space Deterrence,” European Leadership Network, February 20, 2018, <https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/>] TDI

Fourth, the ubiquity of space infrastructure and the fragility of the space environment may create a degree of existential deterrence. As space is so useful to modern economies and military forces, a large-scale disruption of space infrastructure may be so intuitively escalatory to decision-makers that there may be a natural caution against a wholesale assault on a state’s entire space capabilities because the consequences of doing so approach the mentalities of total war, or nuclear responses if a society begins tearing itself apart because of the collapse of optimised energy grids and just-in-time supply chains. In addition, the problem of space debris and the [political-legal hurdles to conducting debris clean-up](https://doi.org/10.1080/14777622.2014.890489) operations mean that even a handful of explosive events in space can render a region of Earth orbit unusable for everyone. This could caution a country like China from excessive kinetic intercept missions because its own military and economy is increasingly reliant on outer space, but perhaps not a country like North Korea which does not rely on space. The usefulness, sensitivity, and fragility of space may have some existential deterrent effect. [China’s catastrophic anti-satellite weapons test in 2007](https://defenceindepth.co/2017/01/11/chinas-space-weapons-test-ten-years-on-behemoth-pulls-the-peasants-plough/) is a valuable lesson for all on the potentially devastating effect of kinetic warfare in orbit.

#### 3] Alliances check miscalc – too costly

MacDonald 13 [(Bruce, teaches at the United States Institute of Peace on strategic posture and space/cyber security issues, leads a study on China and Crisis Stability in Space, and is adjunct professor at the Johns Hopkins School of Advanced International Studies) “Deterrence and Crisis Stability in Space and Cyberspace,” in Anti-satellite Weapons, Deterrence and Sino-American Space Relations, September 2013, <https://apps.dtic.mil/dtic/tr/fulltext/u2/a587431.pdf>] TDI

The US alliance structure can promote deterrence and crisis stability in space, as with nuclear deterrence. China has no such alliance system. If China were to engage in large-scale offensive counter-space operations, it would face not only the United States, but also NATO, Japan, South Korea and other highly aggrieved parties. Given Beijing’s major export dependence on these markets, and its dependence upon them for key raw material and high technology imports, China would be as devastated economically if it initiated strategic attacks in space. In contrast to America’s nuclear umbrella and extended deterrence, US allies make a tangible and concrete contribution to extended space deterrence through their multilateral participation in and dependence upon space assets. Attacks on these space assets would directly damage allied interests as well as those of the United States, further strengthening deterrent effects.

#### 4] Hacking of SATs by the government nonuniques this advantage–

Akoto 20 “Hackers could shut down satellites -- or turn them into weapons” February 13, 2020 William Akoto [a postdoctoral research fellow at the University of Denver.] <https://www.upi.com/Top_News/Voices/2020/02/13/Hackers-could-shut-down-satellites-or-turn-them-into-weapons/4091581597502/> SM

This scenario played out in 1998 when hackers took control of the U.S.-German ROSAT X-Ray satellite. They did it by hacking into computers at the Goddard Space Flight Center in Maryland. The hackers then instructed the satellite to aim its solar panels directly at the sun. This effectively fried its batteries and rendered the satellite useless. The defunct satellite eventually crashed back to Earth in 2011. Hackers could also hold satellites for ransom, as happened in 1999 when hackers took control of the U.K.'s SkyNet satellites.

Over the years, the threat of cyberattacks on satellites has gotten more dire. In 2008, hackers, possibly from China, reportedly took full control of two NASA satellites, one for about two minutes and the other for about nine minutes. In 2018, another group of Chinese state-backed hackers reportedly launched a sophisticated hacking campaign aimed at satellite operators and defense contractors. Iranian hacking groups have also attempted similar attacks.

#### 5] No impact---attacks will be small, no dispersion, and countermeasures solve

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The bioterror WMD myth. Those who have overemphasized the bioterrorism threat typically portray it as an imminent concern, with emphasis placed on high-consequence, mass-casualty attacks, performed with weapons of mass destruction (WMD). This is a myth with two dimensions.¶ The first involves the identities of terrorists and what their intentions are. The assumption is that terrorists would seek to produce mass-casualty weapons and pursue capabilities on the scale of 20th century, state-level bioweapons programs. Most leading biological disarmament and non-proliferation experts believe that the risk of a small-scale bioterrorism attack is very real and present. But they consider the risk of sophisticated large-scale bioterrorism attacks to be quite small. This judgment is backed up by historical evidence. The three confirmed attempts to use biological agents against humans in terrorist attacks in the past were small-scale, low-casualty events aimed at causing panic and disruption rather than excessive death tolls. ¶ The second dimension involves capabilities and the level of skills and resources available to terrorists. The implicit assumption is that producing a pathogenic organism equates to producing a weapon of mass destruction. It does not. Considerable knowledge and resources are necessary for the processes of scaling up, storage, and dissemination. These processes present significant technical and logistical barriers.¶ Even if a biological weapon were disseminated successfully, the outcome of an attack would be affected by factors like the health of the people who are exposed and the speed and manner with which public health authorities and medical professionals detect and respond to the resulting outbreak. A prompt response with effective medical countermeasures, such as antibodies and vaccination, can significantly blunt the impact of an attack.

#### 6] No Escalation over Satellites:

#### A] Planning Priorities

Bowen 18 Bleddyn Bowen 2-20-2018 “The Art of Space Deterrence” <https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/> (Lecturer in International Relations at the University of Leicester)//Elmer

Space is often an afterthought or a miscellaneous ancillary in the grand strategic views of top-level decision-makers. A president may not care that one satellite may be lost or go dark; it may cause panic and Twitter-based hysteria for the space community, of course. But the terrestrial context and consequences, as well as the political stakes and symbolism of any exchange of hostilities in space matters more. The political and media dimension can magnify or minimise the perceived consequences of losing specific satellites out of all proportion to their actual strategic effect.

#### B] Military Precedent

Zarybnisky 18, Eric J. Celestial Deterrence: Deterring Aggression in the Global Commons of Space. Naval War College Newport United States, 2018. (Senior Materiel Leader at United States Air Force)//Elmer

PREVENTING AGGRESSION IN SPACE While deterrence and the Cold War are strongly linked in the public’s mind through the nuclear standoff between the United States and the Soviet Union, the fundamentals of deterrence date back millennia and deterrence remains relevant. Thucydides alludes to the concept of deterrence in his telling of the Peloponnesian War when he describes rivals seeking advantages, such as recruiting allies, to dissuade an adversary from starting or expanding a conflict.6F 6 Aggression in space was successfully avoided during the Cold War because both sides viewed an attack on military satellites as highly escalatory, and such an action would likely result in general nuclear war.7F 7 In today’s more nuanced world, attacking satellites, including military satellites, does not necessarily result in nuclear war. For instance, foreign countries have used highpowered lasers against American intelligence-gathering satellites8F 8 and the United States has been reluctant to respond, let alone retaliate with nuclear weapons. This shift in policy is a result of the broader use of gray zone operations, to which countries struggle to respond while limiting escalation. Beginning with the fundamentals of deterrence illuminates how it applies to prevention of aggression in space.