# 1NC

## 1

#### The aff’s trust in distinctions between the “private” and “common” strengthens patriarchal binaries where nature and resources are feminized, leading to never ending abuse and destruction

Sotiropoulou 17

(Irene Sotiropoulou, PhD (Economics), Postgrad Diploma (Development Economics), MA (International & European Studies), LLB (Law); (09/2017 accessed 12-29-2021) “Commons and Private Property as a Patriarchal Trap”; https://www.researchgate.net/publication/323259615\_COMMONS\_AND\_PRIVATE\_PROPERTY\_AS\_A\_PATRIARCHAL\_TRAP)//ckd

What is important: in patriarchy, the propertied thing, that “something” that the owner can use, harvest and abuse or dispose, is by priority the human body and nature, i.e. alive creatures, in many cases very similar to the creature that an owner can be. Well, not all human creatures are very similar according to patriarchy. The patriarchal binaries come into force when ownership and property emerge as an issue: women are supposed to be owned by men, children are supposed to be owned by fathers, black workers are supposed to be owned by the white-owned factory that imposes quasi-slavery working conditions or an entire river ecosystem is supposed to be owned by the state or by the corporation that rules the use of the water that runs through the river (Fraser 2013a, Federici 2004, Borneman 1975, Cassano 2009, Dallacosta & James 1975, Graeber 2006). Particularly, nature in patriarchy is not only objectified and understood as existing for humans and for satisfying their own agenda for survival, artistic expression or for beauty seeking. It is also feminised, so that it can be much easier treated the way women are treated in patriarchy: nature can be propertied by men, used, harvested, abused and then destroyed, as there is “plenty of nature” to proceed with more property owners being receiving what their privilege tells them to expect (BennholdtThomsen et al 1986, Mies & Shiva, Von Werlhof 2007, Sotiropoulou 2017a). 4.2. Common and private property Private property, therefore, is the property that belongs to one person or to one household or to one group of people who, as individuals, have agreed among themselves to own a thing by excluding all other people (like a corporation), and the property is passed down to their patrilineal descendants or relatives with the exclusion of other people or the community. Within this context, I understand the distinction between common and private property as being one more patriarchal binary. In addition, common property is never common enough, either for legal or de facto reasons: a river can be regulated as a common for the people living around or for the state that the river runs through, but not all people have access to the river or even if they have, they do not control what happens with the river, with its fish, with the water used for agricultural or industrial purposes. Even when something is deemed to be a “true” common, like the open sea or open space, the use of the common is practically available to those who have the means to navigate through the open sea or open space and to those who use both the sea and space for disposing their garbage and technological externalities, like accidents with environmental impact. It is not a coincidence that those who are practically able to use the global commons usually belong to social groups that are white, European/AngloSaxon, male, middle or upper class, with ownership of capital and land (Agathangelou & Ling 2006). 6 Why is that? Because even if we “all own the open sea”, the open sea is owned truly by those who have the means of production to travel, fish, extract oil or dispose their waste there. Means of production are owned privately in capitalism and in patriarchy. That is, private property is everywhere, even when the condition or the control of a common is under consideration. Moreover, the common property as an institution and as an idea, allows the establishment of property over nature and bodies. It does not matter that the property is not private or that it is not private yet. Even if it remains common, it is still a property with owners and excluded people, with rights to use, harvest and abuse for some, even if those “some” can be the entire humanity. In addition, it is the “common” that makes private property acceptable at the first place. It is not only that in practice (and in history), we have seen in many cases that the norms and/or legislation turned from regulating the common-propertied bodies (human/nonhuman) to allowing or instituting the exclusive right of the patriarch to those bodies, whether human or nonhuman. The patriarch or the private owner, even if it is a patriarchal substitute like a state, has the right, once a common property comes into existence, to distribute or retain that common property, to exclude from that common property social groups or everyone whom the patriarch/patriarchal substitute does not want to have access to (previously) common or (now) private thing, and to include to its control whomever supports patriarchal rights, like a corrupt politician who gets his share of profit for turning a blind eye to environmental destruction in his area (Mies & Shiva, Bennholdt-Thomsen et al 1988, Pateman 1988, Sugden & Punch 2014). 4.3. Property in patriarchy Historically we have not found any social and economic systems other than patriarchy where land and humans become (common or private) property (Lerner 1986, Mayes 2005, Brosius 2004). However, one would think of patriarchy as a system with property, just for the analytical need to avoid essentialism (like saying that property and patriarchy are the same thing and cannot exist otherwise). In patriarchy, most lands and means of production are owned by men or by patriarchal substitutes, like the state, corporations or women who serve patriarchy in all its aspects. That at some point, ownership might reach a person (man or woman) who is not so patriarchal as patriarchy expects them to be, that does not change the structure of the system as such, despite of the cracks or subversive possibilities that such “unfortunate” coincidence might create (Mayes 2005). Moreover, private property is the default institution concerning economic sharing or economic arrangements. Despite of what the discourse of the commons declares now and then, common property is not the default of a patriarchal system and even if it is at some point in history due to historical conditions that go beyond the usual patriarchal structures, patriarchy will make sure that the common property will be patriarchalised and privatised. 7 Sometimes, the process of patriarchalisation and privatisation go hand in hand. An example is the miri system of common/state lands in the Ottoman Empire, that degenerated as time went by, and as the Empire got more and more patriarchal, militarised and capitalised (Dönmez-Atbaşı & Sotiropoulou 2017). Therefore, privatisation is a systemic trait of patriarchy. Patriarchy is not just the economic system that has private property, but the system that has private property which is aggressively expanding. Privatisation expands formally, informally and through interpretation of the commons as spaces serving private property. Aggressiveness of privatisation is not theoretical only: it uses all types of physical violence to be established, increased, deepened and disseminated (Sotiropoulou 2015, Demsetz 1964, Bennholdt-Thomsen et al 1988, Von Werlhof 2007). Even in the construction of non-tangible properties over previously common goods one can see the violence that was a prerequisite for the private property to be instituted. Knowledge, especially medical knowledge, required a massive witchhunt in Western Europe and United States. The patenting of agricultural genetic material and biopiracy required and still requires colonial violence to exist. The construction of arts and culture or of production of know-how as private properties or even as common properties that need to be managed by certain managers and controlled by certain controllers required the violent exclusion or destruction of artists, communities or entire societies that produced goods, arts or entire cultures in ways that were not compatible with private property and patriarchy (Federici 2004, Mies 1998, Peterson 2003, Ehrenreich & English 1973).

#### 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.

#### The K comes first - policies are constituted by and produce subjects, not blanket assessments of outcomes and impacts. The ROB is to interrogate the gendered nature of the 1AC as a research project.

Bacchi 16

(Carol, University of Adelaide, Adelaide, South Australia, Australia, (2016): Policies as Gendering Practices: Re-Viewing Categorical Distinctions, Journal of Women, Politics & Policy, DOI: 10.1080/1554477X.2016.1198207, JKS)

One important constitutive effect is how we are produced as subjects through the problematizations implicit in such texts, a process described as “subjectification” (Bacchi 2009, 16–17). For example, Foucault (1980) argues that specific problematizations of sexuality (e.g., sexuality as moral code, sexuality as biological imperative) create “subject positions” that enjoin people to become particular kinds of sexual subjects (see Howarth and Griggs 2012, 308). Marston and McDonald (2006) describe how individual subjects are produced in specific policy practices “as worker-citizens in workfare programs, as parent-citizens in child and family services or consumer-citizens in a managerial and marketized mixed economy of welfare” (3). Given the proliferation of practices, the formation of one’s subjectivity is an ongoing and always incomplete process: “the doer/subject/person is never fixed, finally as a girl or a woman or whatever, but always becoming or being” (Jones 1997, 267). Subjectification effects therefore are neither deter- mined nor predictable. People sometimes take up subject positions in ways that challenge hierarchical relations. For example, the discourse of rights creates as one possible positioning that of the human rights advocate. Moreover, as practices “through which things take on meaning and value” (Shapiro 1988, xi), policies have material (lived) effects, shaping the possibilities for people’s and peoples’ lives (Bacchi 2009, 16–18). Policies achieve these constitutive effects through discursive practices, which comprise the “conditions of emergence, insertion and functioning” of discourses (Foucault 1972b, 163), and hence bridge a material-symbolic distinction (Bacchi and Bonham 2014). A particular conception of power underpins an understanding of policies as constitutive practices. Power is conceptualized as productive rather than as simply repressive. Power is not considered to be something people possess (e.g., “he or she has power”) but as a capacity exercised in the production of subjects and objects (Heller 1996, 83). This productive or generative view of power does not conclude that power and resistance are necessarily equal in their effects, however. Such a conclusion would deny the hierarchies by which the organization of discourse takes effect (see Howarth and Griggs 2012, 310). This understanding of policy as constitutive of subjects and objects sits in sharp contrast to conventional views of the policy process, which, in the main, can be characterized as reactive. That is, in general, policy is considered to be a response to some condition that needs to be ameliorated or “fixed.” Policies are conceived as “reactions” to “problems.” By contrast, the understanding of policy offered in this article portrays policies as constitutive or productive of (what are taken to be) “problems,” “subjects,” and “objects” (Allan 2010, 14). It follows that it is no longer adequate to think in terms of conventional policy “outcomes,” understood as the results or “impacts” of government actions. New questions are required, such as the following: What does the particular policy, or policy proposal, deem to be an appropriate target for intervention? What is left out? How does the shape of the proposal affect how people feel about themselves and the issue? And how does it produce them as particular kinds of subjects?

## 2

#### Only Earth-Moon lagrange points should be treated as a global commons, not all of space

#### The counterplan limits private companies from interfering or developing lagrange points, but still gives them the ability to develop in other parts of outer space like low earth orbits or other parts of cislunar space between Earth and the Moon.

#### That’s competitive

#### Functionally – it’s a completely different scope from the plan and focuses only on key areas around the moon that are key for their gravitational pull

#### Textually – CP doesn’t include the phrase “outer space” and it’s replaced with a phrase that’s discussed frequently in relevant literature about the topic.

#### Governmental focus on key orbits in cislunar space is crucial – CP is a key starting point to create better space stewardship to solve debris

Hitchens 20 (Theresa, Space and Air Force reporter at Breaking Defense. The former Defense News editor was a senior research associate at the University of Maryland’s Center for International and Security Studies at Maryland (CISSM). Before that, she spent six years in Geneva, Switzerland as director of the United Nations Institute for Disarmament Research (UNIDIR), Breaking Defense, "US Needs New Policies With Move to Cislunar Aerospace Corp," https://breakingdefense.com/2020/06/us-needs-new-policies-with-move-to-cislunar-aerospace-corp/)

Further, if many countries rapidly expand their commercial and military cislunar operations — as that region of space is known — without sufficient forethought about how to manage space traffic and access to limited orbits this could raise risks for military conflict. “Failure to conduct sustainable and transparent operations in an environment with a growing number of players may lead to conflict if careless behavior or unannounced proximity operations are interpreted as hostile acts,” James Vedda, one of the Aerospace authors, told Breaking D in an email today. As Breaking D readers know, national security space leaders are more and more preoccupied with cislunar space — seeing it as a future area of global competition, particularly with China. DoD has myriad new efforts aimed at developing technologies to expand military uses of cislunar space, including by Air Force Research Laboratory’s Space Vehicles Directorate; DARPA’s nuclear-powered rocket project called Demonstration Rocket for Agile Cislunar Operations (DRACO); and the Space Development Agency’s (albeit financially constrained) interest in developing satellites for space domain awareness capabilities to monitor future activities by potential adversaries (read Chinese) around the Moon. The new study, “Cislunar Stewardship: Planning for sustainability and international cooperation,” was authored by Vedda and George Pollock of Aerospace’s Center for Space Policy and Strategy. Aerospace Corporation is a federally funded research and development center (FFRDC) working closely with Air Force, and now Space Force. It explains that by mid-century many nations will be undertaking familiar missions such as communications and intelligence, surveillance and reconnaissance in cislunar space, but also for new types of activities potentially including asteroid mining, on-orbit gas stations for spacecraft, and even space-based manufacturing facilities. The expected boom in cislunar operations, Aerospace finds, means the United States and other spacefaring nations should start developing both technical and regulatory measures to avoid future disasters. This includes figuring out how debris mitigation would work in cislunar orbits, policy changes that would allow third-party debris removal, and international agreements for space traffic management. The study, aimed primarily at policymakers, is both a technical primer on the potential uses of cislunar space and a call to early action to ensure its future sustainability: As cislunar activity grows, a policy framework should be developed to promote the sustainability of operations in these locations. Motivated by lessons learned in space operations thus far, this paper discusses the need to extend best practices for debris mitigation (preventing its accumulation) to cislunar space lest we create a space debris mess in this valuable regime. Additionally, current international policy prevents spacefaring nations from removing space debris left by other actors. Significant policy adjustments are needed if debris remediation (removal of nonfunctional and potentially dangerous objects from useful orbits) is to become an effective complement to debris mitigation in cases where mitigation is not completely effective. Beyond the extension of current practices, significant future work remains in characterizing new orbital environments, monitoring their evolving use, and determining appropriate sustainability practices.” There is no legal definition of cislunar space, but in general it refers to the orbits between Geosynchronous Orbit — 36,000 kilometers above the Earth — and the Moon. Some definitions include orbits slightly beyond the Moon as well. The study authors say that it is “reasonable” to expect that in the near- to medium-term “a greater variety of cislunar orbits will be used for an assortment of space applications, including communications, navigation, space domain awareness, scientific remote sensing, and human exploration.” And in addition to simply expanding the frontiers for these current space activities, cislunar orbit could host new types of space applications: Next-generation multi-purpose orbiting platforms for use as labs, manufacturing facilities, and habitats Propellant storage depots Research outposts on the moon Extraction, processing, and use of extraterrestrial resources Training and support for deep space missions Of particular value to both commercial and military operations could be the physically limited — and potentially environmentally fragile — orbits that comprise “relatively stable gravitational points” — called Lagrange or libration points — where spacecraft can essentially ‘hover’ without the expenditure of much if any fuel to maintain their position. These orbits may even see “aggregation of space structures into industrial parks,” Aerospace finds.

#### Debris triggers accidental nuclear miscalc

**Lamrani ’16** (Omar Lamrani, Senior Military Analyst, Omar Lamrani focuses on air power, naval strategy, technology, logistics and military doctrine for a number of regions, including the Middle East and Asia. He studied international relations at Clark University and holds a master's degree from the Diplomatic Academy of Vienna, where his thesis centered on Chinese military doctrine and the balance of power in the Western Pacific, Stratfor, “Avoiding a War in Space”, <https://worldview.stratfor.com/article/avoiding-war-space>, May 17, 2016)

A war in space would disable a number of key satellites, and the resulting **debris would place vital** orbital **regions at risk**. The damage to the world economy could also be disastrous. **In severity, the consequences of space warfare could be comparable to those of nuclear war.** What's more, disabling key constellations that **give early launch warnings** could be seen as the **opening salvo in a nuclear attack**, **driving the threat of a wider conflagration**.

#### Specifically, unanticipated collisions cause US-China miscalc and nuclear war

Fabian 19 [Christopher David, Bachelor of Science, USAFA. Master of Science in Space Studies Thesis. “A Neoclassical Realist’s Analysis Of Sino-U.S. Space Policy” January 2019 <https://commons.und.edu/cgi/viewcontent.cgi?article=3456&context=theses>]

Morgan points out that the nature of space deterrence has fundamentally changed since the end of the Cold War. First, a decoupling of space and nuclear warfare has destroyed the tacit red lines that guaranteed an attack on space systems would result in nuclear retaliation.60 Furthermore, technologies have been developed that allow for incremental escalation and nonlethal functional kills of space assets.61 A paradigm is created where escalation is probable, but the extent to which it will happen is unknown. This is a problem for Sino-U.S. space relations because China is a nuclear capable power who believes itself to have achieved nuclear deterrence with the United States, yet does not have the implied strategic understanding that it took the U.S. and the U.S.S.R. four decades to build. The rules of the game have changed, but the danger of nuclear apocalypse is still real and a risk of miscalculation has increased. Morgan echoes Johnson-Freese’s assertion that the dual-use phenomenon complicates deterrence and extends the reasoning on offensive dominance by adding valuable insight on the state of first-strike stability. In short, first-strike stability is difficult to maintain because the disproportionate gain from a first strike outweighs any cost a recipient can impose in response. The United States’ overwhelming reliance on and comparative advantage from space based effects gives a prospective attacker very high payoff and satellites being relatively soft targets increases the likelihood of success and further adds to the benefit of a first-strike.62 Conversely, the emphasis on system based warfare means that an effective attack on space assets drastically reduces the ability of the U.S. to impose costs. Also, its overreliance on space and the fragility of the space environment require an asymmetric response to both avoid a tit-for-tat spiral and protect the continued use of the domain. Furthermore, a lack of space situational awareness (SSA) prevents a rapid response.63 Chinese military planners are acutely aware of the asymmetric advantage to be gained from a first-strike in space and have integrated it into military doctrine. This further strengthens the argument of space warfare as a flash point in East Asia. The structural factors examined in the literature thus far paint a bleak picture for a peaceful restructuring of East Asia. However, a bipartisan grand strategy that preempts conflict, is sustained and refined over decades, and has an acute sense of both a competitor and one’s own culture and history may be able to subvert structural determinism.64 When imperfect rationality and miscalculation results in deterrence failure it is difficult to underestimate the importance of understanding a competitor’s decision making apparatus. Strategic culture, political climate, and soft power interactions are the core of this apparatus. Joan Johnson-Freese, who is equal parts East Asia policy and space policy expert, asserts that, “it might be generally possible to grasp the mechanics of the Chinese space program without the benefits of historical information, but the likelihood of truly understanding the policy aspects without this contextual information is slightly less, and attempts at analysis and extrapolation become superficial at best.”65 Likewise, competitive strategy will be ineffective absent an understanding of one’s own limitations. Resources such as latent military capacity, budget, political capitol, strategic culture, and soft power/international prestige should be easy to calculate, but many times within the space program’s short history the failure to grasp internal limitations has been a stumbling block. Henry Kissinger’s On China is a nuanced examination of Chinese strategic culture that benefits from the author’s understanding of Chinese history and the nation’s role in late20th/early-21st century global power politics. He conveys a unified message through On China, that continual *diplomatic engagement* between the two *powers* is *the* key to peace and develops two motifs throughout the work. First, misapprehension of Chinese intent by western powers has repeatedly resulted in conflict, which could be avoided with better understanding of Chinese strategic culture. Traditional Chinese strategic culture, shaped for millennia by geography and Confucian principals, was not destroyed by Mao and the communist revolution as many assert. Kissinger uses the traditional martial games of wei qi (go) and chess to exemplify Chinese and western strategic cultures respectively. Where wei qi teaches the art of strategic flexibility by emphasizing encirclement, protracted and asymmetric warfare, generating unperceptively small advantages, and momentum; chess teaches total victory achieved by attrition, decisive moves, centers of gravity, and symmetry. Carl von Clausewitz teaches that war is policy by other means, inferring war as a distinct phase of politics; while Sun Tsu emphasizes victory before fighting by achieving psychological advantage with military means as a small part of overall strategy. The ideal Chinese military conflict is geographically limited and easily contained; the American way of war concludes only upon total victory. Kissinger then describes the feedback loop that results from conflicting strategic perspectives. The western desire for control threatens Chinese freedom of maneuver and exacerbates their siege mentality. In response, China assumes a policy of active defense (preemption) in order to maintain the strategic initiative. This, in turn, is seen as hostile by the west and typically results in escalation in order to establish deterrence through cost imposition. The western idea of deterrence is incompatible with ambiguity and flexibility while Chinese preemption demands it.67 This results in a distinguishable pattern. First, a state consolidates power on China’s periphery, surrounding China and threatening its structural integrity on both physical and psychological levels. Second, ever aware of shi, Chinese strategists employ measures to maintain their strategic flexibility and prevent total encirclement. Third, the peripheral power misinterprets preemption for aggression and escalates the conflict. At this point, China is either able to contain the threat and achieve its geopolitical aims or it is too weak to do so and is thrown into existential crisis. In the 20th century, this pattern has been exemplified by Chinese involvement in the Korean War and its continued support of an independent state to buffer the U.S. alliance bloc from a historical ingress point to the Chinese mainland; its own Vietnam War to prevent the emergence of a competitive power bloc led by Vietnam in Southeast Asia; and Chinese political maneuvering against the Soviet Union to prevent its consolidation of power over the Eurasian landmass. Disregarding the similarities between these disputes and the current Sino-U.S. position in East Asia is impossible.68 Second, the Sino-centric worldview is rising in China as she emerges from a century of humiliation to become an economic and military superpower. The over-proselytized American belief that the implementation of democracy should be the end goal of global politics and unapologetically moralist positions conflict with Sino-centrism. It is seen by China as an extension of colonial interventionism and a threat to their fiercely held autonomy. U.S. diplomacy is often contingent on the improvement of China’s human rights record. Widespread support for China’s various separatist movements and public outcry over the Tiananmen Square incident has exacerbated this problem. American reluctance to recognize the legitimacy of a communist government, give up democratization as long term policy goals, or give China its due in international relations has weakened Sino-U.S. relations. America’s moralist rather than pragmatic approach to policy threatens China’s delicate social order and undermines CCP legitimacy, resulting in missed diplomatic opportunities. Other policy analysts are certainly influenced by Kissinger, but add their own insight into Chinese Strategic culture. Kenneth Johnson and Andrew Scobell writing for the Strategic Studies Institute both attribute the apparent cognitive dissonance in Chinese policy to a curious blend of Confucian ideals and realpolitik thought, supporting Kissinger’s assertion that Confucianism is not dead. There is a cult of defense within China, accompanying a deeply held belief that China’s strategic culture is overwhelmingly pacifist. However, preemptive action is permissible as long as it can be a justifiable “defense” of Chinese strategic interests.70 In addition, China bemoans aggressive territorial expansion and hegemony by force. This historical sensitivity has only been exacerbated by the “century of humiliation” at the hands of European powers.71 However, the benevolent expansion of influence and the use of force for Chinese national unification is just. Furthermore, the Chinese fear of encirclement could cause a disproportionate reaction to the U.S. force realignment and restructuring of alliances in East Asia. This could exacerbate the worsening of the security dilemma that alliance forming typically causes. Joan-Johnson Freese emphasizes the influence of Confucianism in internal decision making and the penchant for isolationism. Confucianism emphasizes peace, order, and knowing one’s place within society. This invites authoritarianism and the Chinese people have little experience with participation in the political process. Rather, there is an instability lurking beneath the calm surface of society that leaders must constrain and satisfy in order to maintain their mandate to rule. The social contract has a simple results based nature where political stability and prosperity is exchanged for the continued political power. The Chinese Communist Party then is less beholden to communist ideology than it is to continued prosperity. Also, despite the negative connotation of nepotism in the West, it is an institution of Chinese culture (known as Guan Xi). From the outsider, the familial ties, importance of relationships, compartmentalization, and ambiguity in the Chinese bureaucracy are confusing and frustrating. This research paints the picture of the U.S. and China as diametrically opposed cultures that are almost designed to create misunderstanding between the two. Therefore, being aware of cultural and political sensitives is necessary to create sound strategy. Michael Pillsbury identifies 16 psycho-cultural pressure points where, if correctly considered in reassurance, cost imposition, or dissuasion strategies, will yield disproportionately effects whether they be positive or negative. Each of these factors are referred to as “fears”. Eleven of the sixteen fears are linked to the ability of the U.S. military to project power into East Asia and the strategic sea lines of communication from the Strait of Malacca to the Bohai Gulf, which is contingent on the ability to deliver space effects in support of U.S. military operation. Pillsbury identifies the fear of attack on their anti-satellite capabilities as a specific Chinese fear, but warfighting in the space domain is intrinsically linked to the other 11. Another of the sixteen fears is the fear of escalation and loss of control. This is particularly important because the Chinese view ASAT weaponry as a legitimate cost imposition option designed to limit conflict. Contrast that with the American strategy of threatening escalation in order to prevent the spread of the conflict into space and implicit red lines that fail to account for limited conflict in a strategic domain. Space’s role in soft power links it to two final fears, the fear of regional competitors and the fear of internal instability. Space technology development is essential to the CCP’s techno-nationalist narrative as it is assigned great importance internally to strengthen CCP’s mandate to rule and externally to legitimize China as a regional leader.

## Case

### Framing

**1] Moral uncertainty means preventing extinction should be our highest priority.  
Bostrom 12** [Nick Bostrom. Faculty of Philosophy & Oxford Martin School University of Oxford. “Existential Risk Prevention as Global Priority.” Global Policy (2012)]  
These reflections on **moral uncertainty suggest** an alternative, complementary way of looking at existential risk; they also suggest a new way of thinking about the ideal of sustainability. Let me elaborate.¶ **Our present understanding of axiology might** well **be confused. We may not** nowknow — at least not in concrete detail — what outcomes would count as a big win for humanity; we might not even yet **be able to imagine the best ends** of our journey. **If we are** indeedprofoundly **uncertain** about our ultimate aims,then we should recognize that **there is a great** option **value in preserving** — and ideally improving — **our ability to recognize value and** to **steer the future accordingly. Ensuring** that **there will be a future** version of **humanity** with great powers and a propensity to use them wisely **is** plausibly **the best way** available to us **to increase the probability that the future will contain** a lot of **value.** To do this, we must prevent any existential catastrophe.

2] Independently, extinction turns inequality impacts – mass death causes massive amounts of inequality

#### 3] The future definitively outweighs the present under any framework

Todd ’17 [Benjamin, Ben managed 80,000 Hours while it grew from a lecture, to a student society, to the organisation it is today. Before 80,000 Hours, he was the first undergraduate to intern as an analyst at a top investment fund. He has a 1st from Oxford in Physics and Philosophy, has published in Climate Physics, once kick-boxed for Oxford, and speaks Chinese, badly, “Future generations and their moral significance”, October 2017, https://80000hours.org/articles/future-generations/]//pranav

In almost all of these cases, there’s potentially a lot more of it to come in the future: The Earth could remain habitable for 600-800 million years,1 so there could be about 21 million future generations,2 and they could lead great lives, whatever you think “great” consists of. Even if you don’t think future generations matter as much as the present generation, since there could be so many of them, they could still be our key concern. Civilization could also eventually reach other planets — there are 100 billion planets in the Milky Way alone.3 So, even if there’s only a small chance of this happening, there could also be dramatically more people per generation than there are today. By reaching other planets, civilization could also last even longer than if we stay on the Earth.If you think it’s good for people to live happier and more flourishing lives, there’s a possibility that technology and social progress will let people have much better and longer lives in the future (including those in the present generation). So, putting these first three points together, there could be many more generations, with far more people, living much better lives. The three dimensions multiply together to give the potential scale of the future. If what you value is justice and virtue, then the future could be far more just and virtuous than the world today.4 If what you value is artistic and intellectual achievement, a far wealthier and bigger civilization could have far greater achievements than our own. And so on. This suggests that, insofar as you care about making the world a better place, your key concern should be to increase the chance that the future

goes well rather than badly. This isn’t to deny that you have special obligations to your friends and family, and an interest in your own life going well. We’re only talking about what matters insofar as you care about helping others in general. Philosophers often say what matters “from the point of view of the universe” or according to “impartial altruism”. We think everyone should care about the lives of other people to some degree, even though it might not be your only goal. People often assume the long-term value thesis is especially about the possibility of there being lots of people in the future, and so only of interest to a narrow range of ethical views (especially utilitarian totalism), but as we can see in the list above, it’s actually much broader. It just rests on the idea that if something is of value, it’s better to have more of what’s valuable rather than less, and that it’s possible to have much more of it in the future. This might include non-welfare values, such as beauty or knowledge. The arguments are also not about humans; rather, they concern whatever agents in the future might have moral value, including other species. People also often think that the long-term value thesis assumes the future will have positive rather than negative value. Quite the opposite is true — the future could also contain far more suffering than the present, and this implies even more concern for how it unfolds. It’s important to reduce the probability of bad futures as well as increase the probability of good ones.

#### 4] Governments must use util since they can’t focus on every individual rights violation

Goodin 95 Robert, 1995, Philosopher of Political Theory, Public Policy, and Applied Ethics. Utilitarianism as a Public Philosophy, Cambridge University Press, pg. 26-27

The great advantage of utilitarianism as a guide to public conduct is that it avoids gratuitous sacrifices, it ensures as best we are able to ensure in the uncertain world of public policy-making that policies are sensitive to people’s interests or desires or preferences. The great failing of more deontological theories, applied to those realms, is that they fixate upon duties done for the sake of duty rather than for the sake of any good that is done by doing one’s duty. Perhaps it is permissible (perhaps it is even proper) for private individuals in the course of their personal affairs to fetishize duties done for their own sake. It would be a mistake for public officials to do likewise, not least because it is impossible. The fixation on motives makes absolutely no sense in the public realm, and might make precious little sense in the private one even, as Chapter 3 shows. The reason public action is required at all arises from the inability of uncoordinated individual action to achieve certain morally desirable ends. Individuals are rightly excused from pursuing those ends. The inability is real; the excuses, perfectly valid. But libertarians are right in their diagnosis, wrong in their prescription. That is the message of Chapter 2. The same thing that makes those excuses valid at the individual level – the same thing that relieves individuals of responsibility – makes it morally incumbent upon individuals to organize themselves into collective units that are capable of acting where they as isolated individuals are not. When they organize themselves into these collective units, those collective deliberations inevitably take place under very different circumstances and their conclusions inevitably take very different forms. Individuals are morally required to operate in that collective manner, in certain crucial respects. But they are practically circumscribed in how they can operate, in their collective mode. And those special constraints characterizing the public sphere of decision-making give rise to the special circumstances that make utilitarianism peculiarly apt for public policy-making, in ways set out more fully in Chapter 4. Government house utilitarianism thus understood is, I would argue, a uniquely defensible public philosophy.

### Adv 1

#### 1] Turn -- Private companies are the cornerstone of debris cleanup efforts

Clark 21

[(Stephen Clark, Journalist @ Spaceflight Now; (03-22-21); “Privately-funded mission takes off to begin space debris cleanup trials”; https://spaceflightnow.com/2021/03/22/privately-funded-mission-takes-off-to-begin-space-debris-cleanup-trials/]((Stephen%20Clark,%20Journalist%20@%20Spaceflight%20Now;%20(03-22-21);%20))//ckd

A commercial mission developed by the Japanese company Astroscale rocketed into space on a Russian Soyuz launcher Monday with 37 other payloads, ready to kick off an orbital “dance” with two small spacecraft demonstrating how satellite sweepers might one day drag junk out of orbit. The privately-funded mission is a pathfinder for future satellites that could roam busy orbital traffic lanes to link up with old pieces of space junk and drive them back into Earth’s atmosphere. The End-of-Life Services by Astroscale demonstration mission, known as ELSA-d, will use two small satellites launched in tandem to perform a series of trials in low Earth orbit around 340 miles (550 kilometers) above the planet. The ELSA-d satellites launched into orbit aboard a Russian Soyuz booster Monday at 2:07:12 a.m. EDT (0607:12 GMT) from the Baikonur Cosmodrome in Kazakhstan. Sporting an unusual white and blue paint scheme to mark the upcoming 60th anniversary of the first human spaceflight mission, the Soyuz-2.1a rocket deployed a Fregat upper stage in space, which fired its engine several times over four hours to inject 38 small and medium-size international satellites into three different orbits. The biggest payload on-board Monday’s launch was the South Korean CAS500 1 Earth observation satellite. Four commercial Earth-imaging satellites from the Japanese company Axelspace and dozens of smaller commercial and research missions also launched Monday. [Read our preview story](https://spaceflightnow.com/2021/03/18/soyuz-rocket-with-special-paint-scheme-rolls-out-to-baikonur-launch-pad/) for details on all the satellites on Monday’s commercial mission, which was managed by GK Launch Services, a division of the government-owned Russian space company Glavkosmos. Astroscale’s ELSA-d mission was one of the larger satellites on the mission, and it was one of the last payloads deployed from the Fregat upper stage. Tokyo-based Astroscale confirmed the ELSA-d spacecraft was healthy and unfurled its power-generating solar panels after separation from the Fregat in orbit. “Great start!” tweeted Nobu Okada, founder and CEO of Astroscale. The larger of the two ELSA-d satellites, designated the “Servicer” spacecraft, launched connected with a “Client” satellite. The two spacecraft will separate from each other before commencing their experiments. Using on-board navigation aids, the two satellites will dock and undock several times over the course of the six-month demonstration mission, simulating an approach to a stable piece of space junk and then practicing for a docking with a tumbling object in orbit. The satellites will use magnets to connect with each other in space. ELSA-d is the first commercial mission to demonstrate technologies to remove space junk from orbit. The satellites have a combined mass of about 423 pounds, or 192 kilograms. The Servicer was built by Astroscale in Japan and the Client was manufactured by Surrey Satellite Technology Ltd. in the United Kingdom. “This mission is really going to be the first demonstration mission that demonstrates capabilities of removal from end-to-end, from the capture, detumble, to the lowering of the orbit of the client, so it’s pretty monumental for us. We’re very excited,” said Mike Lindsay, Astroscale’s chief technology officer. Astroscale employees in Hartwell, England, will oversee ELSA-d’s operations after launch. The UK Space Agency licensed the first-of-its-kind mission. Founded in 2013, Astroscale has nearly 200 employees distributed in offices in Japan, the United Kingdom, the United States, Israel, and Singapore. The company has raised $191 million in capital to help jump-start its operations. ELSA-d’s Servicer satellite has all the smarts to perform the complex navigation, rendezvous, and docking maneuvers required to link up with the Client. The smaller Client spacecraft, standing in for an old satellite or rocket body needing help getting out of orbit, has a ferromagnetic plate that serves as a docking target for the Servicer. It’s painted with a pattern of shapes to help the Servicer determine its range and motion relative to the Client. “The servicer has all the remote sensing capabilities to assess the tumble rate, the condition of the client, the attitude control and the orbit control to do the rate matching and docking maneuvers,” Lindsay said earlier this month in a presentation at the LRA Institute’s Space Disposal and Debris Mitigation Conference. “The Servicer will be using a magnetic capture device,” Lindsay said. “We like this idea because we can simplify the robotic interface … We have a magnetic interface there, so it tolerates a lot of additional error, translation error, and rotation and angular. So it’s a really robust capture system, which is really key for when you’re trying to dock with a client that is not necessarily controlling its own attitude.” Demonstrating the Servicer can dock with a tumbling spacecraft is a critical part of the ELSA-d mission. With few exceptions, all of the failed satellites and spent rocket stages in orbit were never designed to be serviced or receive a visiting spacecraft. They have no docking ports, and most are uncontrolled, drifting and tumbling as they circle the planet hundreds to thousands of miles up. As of December, the European Space Agency said there were about 26,000 objects in orbit regularly tracked and catalogued by space surveillance networks. About 90% of those objects were no longer functioning, according to ESA. Astroscale’s ground team will shepherd the ELSA-d mission through progressively more complex maneuvers later this year. “The first demonstration is we separate the Client, we hold the Client steady, and we just demonstrate a cooperative docking maneuver,” Lindsay said. “It should be relatively straightforward.” “The next demonstration is we release the client, and the Client goes into a simulated natural tumbling motion. This is not really known by the Servicer. So the servicer will start its mission by assessing the tumble rates of the client,” Lindsay said. “It uses the fiducial pattern on the docking plate to aid the determination of rates, and it uses that pattern again to help guide the docking. So the Servicer will do this rate matching.” When it comes to space debris removal, this is where the rubber hits the road. Engineers designing a removal mission are unlikely to know the state of the piece of space junk until the satellite gets close. “We call this the dance, where it matches the tumble rate, finds the docking plate, and then docks with it and stabilizes the Client,” Lindsay said. “And the final demonstration is we will release the client and separate enough to essentially lose the client from the Servicer’s standpoint,” Lindsay said. “We, of course, know where the client is on the ground, and it’s well within the instrument capabilities on the Servicer. The servicing spacecraft will locate its companion and close in for docking. “It’s critical to demonstrate because of the population of debris objects that are on-orbit,” said Clare Martin, Astroscale’s executive vice president of programs and operations. “A lot of those are rocket bodies. They are tumbling objects and they’re not going to be able to control their attitude as we try to approach and dock with them.” “Once you have that relative motion zeroed out between Servicer and Client, then things get a lot easier,” Lindsay said. “You can better assess the condition of the client. You’re looking at a steady point for docking, and any sort of contact that is made, you’re minimizing the shocks, potential torques, to the combined system. “Once we have those rates zeroed out, the magnetic approach is a single degree of freedom,” Lindsay said. “We don’t need to have a multi-degree of freedom robotic arm to carry out this mission. So ELSA-d is kind of simplifying the docking as much as possible, but maturing the dance operations, which is going to be key for all future missions.” With ELSA-d’s third and final docking complete, Lindsay said spacecraft will go into a “passive decay orbit” to allow atmospheric drag to pull it back into Earth’s atmosphere, well within 25 years, the guideline for space missions to ensure they don’t become a source of new space junk. Lindsay said the ever-increasing rate of launches, putting up thousands of satellites in mega-constellations like SpaceX’s Starlink, OneWeb, and other planned broadband internet networks, is forcing the entire space industry to look at the space debris problem. “The utilization of space, the assets that are being put in orbit, is increasing at exponential rates,” Lindsay said. “Where are the remediation technologies — the investment there? Where is the policy to support sustainability? It’s trailing, so what can we do about that?” There’s better space situational awareness, getting a better picture of what the risks are and better assess the situation,” he said. “Only when you understand the situation can you fix and understand how the factors play against each other, can you really start to think about remediation, and how do we solve the problem going forward. “Active debris removal has to be a major part of the equation,” Lindsay said. “Large debris objects pose a risk by themselves, but then if they become smaller pieces, it becomes even more of a risk.” More launch companies are setting aside fuel in their rockets to deorbit spent upper stages once they deploy their payloads. SpaceX plans to drop its Starlink satellites out of orbit at the end of their lives, and OneWeb is placing a ferromagnetic plate similar to the one on the ELSA-d mission on all of its internet satellites, setting them up for future debris removal missions. “We really need to be planning our satellites for end-of-life scenarios, planning ahead of time to prepare your satellite such that it can be captured or having a backup plan,” Lindsay said. He said it’s important to ensure “that deorbit can be achieved in both nominal and off-nominal cases if there’s a failure. Getting it out of orbit quickly is important.” “The removal of hazardous space debris is not only environmentally important but is also a huge commercial opportunity for the UK, with companies like Astroscale leading the way in demonstrating how we can make space safer for everyone,” said Amanda Solloway, the UK’s science minister. “I am proud the UK Government not only helped make this mission a reality but is Europe’s largest investor in helping with space clean-up,” Solloway said in a statement. “As we build back better, we will continue to drive growth by investing in the technologies that have made today’s breakthrough possible.

” The ELSA-d mission’s technology trials will try to make space debris removal closer to reality, but there are other hurdles for company’s like Astroscale that want to make money doing it. “The problem is three-fold, and we work on all aspects of that,” Martin said. “The technology is one aspect. It is something that we all enjoy doing. But we focus also on policy and regulation.” She said Astroscale is working with governments and industry “to both educate and support the establishment of responsible policy to encourage sustainable space.” “The third aspect is of course business case,” Martin said. The U.S. Space Force’s vice chief of space operations [said earlier this month](https://spacenews.com/u-s-space-force-would-support-commercial-services-to-remove-orbital-debris/) that the military would be interested in buying debris removal services if they were commercially available. “We’re actively engaging with the Space Force in order to educate them on our capabilities and services, and the fact that we’re a fully established U.S. company,” Martin said, referring to Astroscale’s Colorado-based business unit focused on the U.S. market. “Everybody is probably more reliant on space than they ever realized,” Martin said. “People are now much more aware that space isn’t just the purview of the elite. It’s actually something that is relied upon in everyday life. And therefore … taking the responsible steps to make sure that it’s a resource that’s available for a very long time to come is absolutely vital for us.” Getting international policymakers and entrenched industrial interests to buy in on debris removal is “obviously a big challenge,” Lindsay said. “Everyone can see the long-term issue but not everyone wants to invest in the short-term solution,” he said. “We need to inform the policies in order to support our activities. We need to be able to license the type of activities that we wish to do, and a lot of this is kind of new and unfamiliar to certain license processes. So we have to kind of work with various entities to kind of pioneer some of the solutions.” Lindsay said decision-makers are starting to recognize the space debris problem, and introducing designs to allow satellites to be robotically serviced after launch. Lockheed Martin said earlier this year said it was looking at upgrading future GPS satellites for servicing in orbit. “The notion of launching something that could potentially be serviced is something that’s really starting to take hold,” Lindsay said. “No longer are you sending something up into space that will never be touched again. This is a good thing toward sustainability if we start designing more satellites and launching our satellites with this in mind, thinking long term, across all orbits.” The ferromagnetic docking plate flown on OneWeb satellites, and on the ELSA-d Client spacecraft, is as simple as it comes, Lindsay said. “It’s completely passive on the client side, low mass, low profile, it has three bolts on it,” he said. “You just put it on there and now you have a backup plan.” Astroscale’s ELSA-d mission follows a pioneering mission named RemoveDebris, which launched from the International Space Station in 2018 and demonstrated the use of a net and a harpoon to capture simulated space junk. Astroscale will take the next step in debris removal experiments with an attempt to dock with a tumbling satellite in orbit. Another small Astroscale satellite is scheduled for launch in late 2022 to survey a disused Japanese rocket upper stage in low Earth orbit, collecting information on the rocket’s condition before a future mission might go capture it and drag it back into the atmosphere to burn up. That mission is a public-private partnership with Japan’s space agency. The rocket stage survey mission will validate technologies to inspect space junk before attempting to move in for docking. Astroscale is also planning a mission that could launch as soon as 2023 to extend the life of a customer satellite in geostationary orbit more than 22,000 miles (nearly 36,000 kilometers) over the equator. The life extension mission is similar to the Mission Extension Vehicle developed by Northrop Grumman. The first MEV mission accomplished the first docking between two commercial satellites in 2020, when it linked up with an aging Intelsat communications satellite and took over propulsion duties. The docking allowed Intelsat to keep operating the satellite even though it was about to run out of fuel. Other companies, such as ClearSpace in Switzerland, are also pursuing the debris removal market. ClearSpace won a European Space Agency contract last year to develop a demonstration mission for launch in 2025 to remove an old Vega rocket adapter from orbit. “Within 10 years, on-orbit servicing, including debris removal will become a routine work in space to make sure space is sustainable and safe,” Okada said.

#### 2] Their impact card is from a decade ago – proves no brightline

#### 3] No solvency – the plan is not reverse-causal so the debris still remains in the LEO

#### 4] Err neg – zero examples of what “space debris” would be added other than satellites, which surely can’t be their only link because more satellites are publicly owned and operated than private

### Adv 2

#### 1] Governments are much more exploitative –

#### a] Things like the BRI, vaccine apartheid, unpaid labor during government shutdowns, colonization, and Persian Gulf wars prove nations only care about power and sovereignty

#### b] If private space entities only want to make money, then it is insanely profitable to bring more people to space colonies or bring back space resources which helps everyone

#### c] Worst of both worlds – governments are painfully slow at innovating and exploring space BUT they are equally if not more exploitative than private companies

#### 2] Mccormick is irrelevant if we prove that a better world isn’t possible to strive for within our environment, ie any extinction impact

### Solvency

#### 1]Plan fails –

#### a] Global commons still allow for private appropriation

#### b] China inevitably undermines solvency

#### c] Too many private actors ensure conflict

#### 2] Turn – limitations on commons access such as private entity restrictions lead to backlash

Stang 13

Gerald Stang (associate fellow at the EUISS) , 2013, "Global Commons: between cooperation and competition" European Institute for security studies, https://www.iss.europa.eu/sites/default/files/EUISSFiles/Brief\_17.pdf, // HW AW

Rapid economic development and increasing international trade are leading to a more crowded international stage and raising new challenges in the ‘global commons’ – those domains that are not under the control or jurisdiction of any state but are **open for use by countries, companies and individuals from around the world**. Their management involves increasingly complex processes to accommodate and integrate the interests and responsibilities of states, international organisations and a host of non-state actors. Shared rules regarding the usage of - and access to - the global commons encourage their peaceful and cooperative use. Over the last seven decades, the US has led in the creation of a liberal international order which has attempted to define these rules in such a way as to make it easier and more beneficial to join the order and follow the rules than it does to operate outside of (or undermine) it. With the rise of nonWestern, less liberal powers - particularly **China - questions must be asked regarding the durability of the existing processes for managing the global commons,** along with the potential for developing effective new processes that can address new threats and challenges. The EU is uniquely positioned to play an important role in giving value to existing multilateral frameworks and in developing new ones for international cooperation in these domains. But with a multitude of competing interests among stakeholders, much work remains to be done. What exactly are the global commons? Security analysts generally identify **four domains as global commons: high seas, airspace, outer space** and, now, cyberspace. From a security perspective, the primary concern is safeguarding ‘access’ to these domains for commercial and military reasons. It is important to highlight that this language differs from the discourse on commons developed by environmental analysts: their arguments focus on damage to the ‘condition’ of the commons from overuse by actors who do not have to pay direct costs. They worry about the depletion of shared resources such as ocean fish stocks, or the damage to shared domains such as Antarctica or the atmosphere. A third strand of analysis looks not at the need for ‘access’ to or preservation of the ‘condition’ of the commons, but at the capacity of the commons to provide ‘global public goods’. As there is no accepted definition of a global public good (a functioning trading system, peace, clean water, electricity, the internet, and many other things are often included), it may be wiser to focus on the four global commons relevant to security analysts mentioned above. While there are major differences between the ‘access’ views of security analysts and the ‘condition’ views of environmentalists, both are concerned about how the Global commons: Between cooperation and competition by Gerald Stang Photo by NASA / Rex Features (1568628a) European Union Institute for Security Studies April 2013 2 rules for use of the commons are set and enforced. In today’s interconnected world, **any limitations on access to the commons would be highly disruptive**. Militaries rely on access to the commons to pursue security goals in domains outside their sovereign control. Economic actors rely on the commons to trade and conduct business. **Changes to the condition of the commons can therefore disrupt commerce and security, not to mention the status of the global environment.** Each of the four commons discussed below possesses unique attributes and poses unique challenges for international cooperation and governance. Sea As the primary avenue for international commerce since ancient times, norms for access to and passage on the seas have developed and evolved over many years. Only in recent decades, however, have there been agreed regulatory frameworks and institutions to manage them. The UN Convention on the Law of the Sea (UNCLOS), first initiated in 1956 though not legally in force until 1994, is the primary international treaty regarding the sea, laying out rules for territorial boundaries (22km from shore), resource management and the rights of states within their exclusive economic zones (370km from shore). The International Tribunal for the Law of the Sea (ITLOS), created by UNCLOS, has the power to resolve disputes by States Parties. Except for the US, most countries and all global powers - including the EU-27 - have signed and ratified UNCLOS. The UN International Migratory Organization (IMO), created in 1948, regulates international shipping and rulings on safety, environmental and technical cooperation issues (the EU has observer status). As the world’s only global sea power, the United States has historically seen itself as the protector of free movement on the seas. With 11 carrier groups (Russia has one, rarely used) and hundreds of naval bases and allied ports throughout the globe, the US has a naval footprint that dwarfs all its allies and competitors. While countries such as Iran and China may be uncomfortable with US capacity to deny others access to the sea, US support for the creation and respect of transparent international regulations for use of the sea (which they adhere to themselves despite not having ratified UNCLOS), has allowed for the stable management of access to the seas. Except for the disruptive (but still rare) threat of piracy, access to the seas is generally a smooth and well-regulated process. The massive and relatively effective, if ad hoc, global response to the localised piracy problem off the coast of Somalia (for which the EU launched Atalanta, its own anti-piracy mission under the CSDP) highlighted the world’s impressive capacity to handle disruptions of this type. Territorial disputes exist in places like the South China Sea, but relate to historical boundary disagreements rather than conflict over rules of sea access. Normally, no state has an interest in disrupting sea trade. Even in times of crisis, while individual states may wish to deny their opponents access to certain regions, they are unlikely to harm their own interests by disrupting traffic on the world’s oceans. Environmental ‘condition’ issues in the sea commons are disconnected from ‘access’ issues. No single international treaty or body addresses pollution, overfishing or the various challenges in the melting Arctic. A confusing patchwork of sea basin cooperation groupings, regional fisheries management organisations and pollution monitoring agreements is in place. The integrated marine policy of the EU recognizes the need to improve governance of the seas while avoiding treaty congestion. While no unifying treaty or body to manage maritime issues is likely to appear, years of patient discussion in a variety of venues (of the type that the EU excels at) may lead to greater coherence and cooperation in managing environmental threats. Air International air travel requires the use of national airspace for continuous transit and involves detailed agreements that define transit rights. The UN International Civil Aviation Organisation, established in 1947, is the leading institution for regulating air travel. All EU countries are members, while the EU has observer status. As with piracy at sea, any potential disruption of access to the air commons is likely to come from non-state actors. While terrorist events can disrupt air traffic, however, intergovernmental cooperation between national police and security agencies is well established. Any systemic threat to the air commons appears so unlikely that some security analysts do not even include air as a one of the commons. Also like the sea commons, issues of management of environmental ‘condition’ are disconnected from ‘access’ issues. The accumulation of greenhouse gases is a form of pollution of the atmosphere, but the alarm stems from their effects on the biosphere rather than from the risk that the atmosphere may become unbreathable or inaccessible. The EU is a global leader on climate change, with the world’s most comprehensive emissions trading scheme and intense efforts to regulate and limit emissions. The Union has set the tone at the international level but has been unable to win agreement for an internal carbon tax or stronger emissions targets from external partners. European Union Institute for Security Studies April 2013 3 Space More than a thousand orbiting satellites facilitate communications in both the military and the civilian spheres, regulated by a mix of UN guidelines, bilater- al Cold War agreements and industry standards. The UN International Telecommunications Union (ITU) allocates radio spectrum and satellite orbits and develops international technical standards. Established in 1869, the ITU has almost universal membership among existing states, including all EU countries - though not the EU itself. The 1967 Outer Space Treaty, signed by all spacefaring nations, provides the minimal framework for activities in space, banning weapons of mass destruction and preventing states from claims to celestial bodies. The Treaty does not establish infrastructure for coordination, and consultation among party states is ad hoc. Following China’s destruction of one of its own satellites in 2007, there has been increasing concern about protection of satellites from attack. During the later stages of the Cold War, the US and the USSR tacitly agreed to a moratorium on testing anti-satellite weapons (ASAT) - but there are no binding rules in place. The satellite’s destruction also created a debris cloud which could have damaged other satellites or spacecraft. Unlike the sea and air domains, the problem of debris management in space indicates an overlap between ‘access’ and ‘condition’

issues. While access to space has previously been limited to a small number of states, **the increasing role of new actors (including from the private sector) suggests that the creation of comprehensive and binding regulations for the space commons may become more difficult.** The EU has pushed to become a key actor in space matters, working with the European Space Agency (ESA) - an intergovernmental body - on Galileo, Europe’s civilian satellite navigation system. In an effort to get ahead of the curve and manage uncertainty, the European Council approved a voluntary Code of Conduct for Outer Space Activities in late 2008 (revised in 2010) to address both space operations and space debris. It has only limited operational requirements but develops important cooperation, consultation, and notification mechanisms. To make it more palatable to the US and other states, it is not binding and has no enforcement mechanism. As with many efforts in multilateral regulation of the global commons, the US has been hesitant to agree to the Code for fear of diminishing its own freedom of manoeuvre. It may be an important step, however, in setting the groundwork for future space cooperation if the EU can follow up on the Code’s development with diplomatic action by bringing other space-faring countries on board. Cyberspace Cyberspace differs from the other commons because it is not a physical domain and because of the preponderant role of the private sector in both the infrastructure and the management of the domain. All of the physical nodes of the internet also exist within states and are subject to national law, rather than existing physically outside of national control as for the other commons. The American and security-related roots of the internet are reflected in how technical internet standards are managed. The Internet Corporation for Assigned Names and Numbers (ICANN), a private non-profit entity under contract with the US government, has ensured the coordination of internet addresses and registries since 1998. While ICANN operations have been stable - and their inclusive governance style has won imitators for handling technical issues - many countries prefer a formal international body to manage technical internet issues. The ITU has been suggested as a neutral management body, but this idea has been resisted by most Western states. Interestingly, non-Western states are pushing for international management of the internet within a framework that provides individual countries with rights and roles, rather than leaving it to the nonprofit sector to decide how the internet works. All EU-27 countries are members of the ITU and, following a European Parliament deliberation, voted as a bloc against the measures granting more power to the ITU, concerned over states wishing to regulate, control, and limit internet use. The UN Internet Governance Forum (IGF) has become the leading multi-stakeholder platform for states and other actors to debate internet governance. Regardless of the ICANN/ITU issue, states can filter and censor within their territories, and for the time being, efforts to protect against cyber attacks remain within the national sphere. Cyberspace allows for the spread of information, creating pressures for transparency in both democratic and non-democratic states. Discussions on the management of cyberspace, therefore, have become connected with those on the power of states to control information. Finally, although there is no environmental constitu- ency for cyberspace, there are constituencies of users and providers - private and public - who play a similar role in pushing for the protection of certain conditions in cyberspace. Unlike for sea and air domains, therefore, there is overlap between ‘access’ and ‘condition’ discussants. With worries about Cold War-style espionage and cyber conflict between states, cyber security problems European Union Institute for Security Studies April 2013 4 QN-AK-13-017-2A-N | ISSN 2315-1110 are expected to grow worse and are unlikely to be addressed through multilateral fora. Problems with hackers of various types make problems of attribution, response and coordination of policing very difficult. Cyber conflict involving states will ebb and flow along with the quality of the relationship between those states and competing states will continue to test each other’s cyber defences.