## 1

#### The affirmative offers a solution: implement PTD to secure against nuclear war This is the wrong approach—we exist within a “control society,” where power is exercised not through repression, but continuous control-- frame this round as an interrogation of productivity and desire.

Deleuze 92[Gilles Deleuze was a French philosopher who, from the early 1950s until his death in 1995, wrote on philosophy, literature, film, and fine art. His most popular works were the two volumes of Capitalism and Schizophrenia: Anti-Oedipus and A Thousand Plateaus, both co-written with psychoanalyst Félix Guattari, Postscript on the Societies of Control on JSTOR, Winter 1992,The MIT press,https://www.jstor.org/stable/778828?seq=1, 12-11-2021 amrita]

The different internments or spaces of enclosure through which the individual passes are independent variables: each time one is supposed to start from zero, and although a common language for all these places exists, it is analogical. On the other hand, **the different control mechanisms are inseparable variations, forming a system of variable geometry the language of which is numerical** (which doesn’t necessarily mean binary). Enclosures are molds, distinct castings, but controls are a modulation, like a self-deforming cast that will continuously change from one moment to the other, or like a sieve whose mesh will transmute from point to point. This is obvious in the matter of salaries: the factory was a body that contained its internal forces at a level of equilibrium, the highest possible in terms of production, the lowest possible in terms of wages; but **in a society of control, the corporation has replaced the factory, and** the corporation is a spirit, a gas. Of course the factory was already familiar with the system of bonuses, but **the corporation works more deeply to impose a modulation of each salary, in states of perpetual metastability** that operate through challenges, contests, and highly comic group sessions. If the most idiotic television game shows are so successful, it’s because they express the corporate situation with great precision. The factory constituted individuals as a single body to the double advantage of the boss who surveyed each element within the mass and the unions who mobilized a mass resistance; but **the corporation constantly presents the brashest rivalry as a healthy form of emulation, an excellent motivational force that opposes individuals** against one another and runs through each, dividing each within. The modulating principle of “salary according to merit**” has not failed to tempt national education itself**. Indeed, just as the corporation replaces the factory, **perpetual training tends to replace the school, and continuous control to replace the examination, which is the surest way of delivering the school over to the corporation**. In the disciplinary societies one was always starting again (from school to the barracks, from the barracks to the factory), while in the societies of control one is never finished with anything—the corporation, the educational system, the armed services being metastable states coexisting in one and the same modulation, like a universal system of deformation. In The Trial, Kafka, who had already placed himself at the pivotal point between two types of social formation, described the most fearsome of juridical forms. The apparent acquittal of the disciplinary societies (between two incarcerations); and the limitless postponements of the societies of control (in continuous variation) are two very different modes of juridical life, and if our law is hesitant, itself in crisis, it’s because we are leaving one in order to enter into the other. **The disciplinary societies have two poles: the signature that designates the individual, and the number or administrative numeration that indicates his or her position within a mass**. This is because the disciplines never saw any incompatibility between these two, and because at the same time power individualizes and masses together, that is, constitutes those over whom it exercises power into a body and molds the individuality of each member of that body. (Foucault saw the origin of this double charge in the pastoral power of the priest—the flock and each of its animals—but civil power moves in turn and by other means to make itself lay “priest.”) **In the societies of control, on the other hand, what is important** is no **longer either a signature or a number, but a code:** the code is a password, while on the other hand the disciplinary societies are regulated by watchwords (as much from the point of view of integration as from that of resistance). The numerical language of control is made of codes that mark access to information, or reject it. **We no longer find ourselves dealing with the mass/individual pair.** Individuals have become “dividuals,” and masses, samples, data, markets, or “banks.” Perhaps it is money that expresses the distinction between the two societies best, since discipline always referred back to minted money that locks gold in as numerical standard, while control relates to floating rates of exchange, modulated according to a rate established by a set of standard currencies. The old monetary mole is the animal of the spaces of enclosure, but the serpent is that of the societies of control. We have passed from one animal to the other, from the mole to the serpent, in the system under which we live, but also in our manner of living and in our relations with others. The disciplinary man was a discontinuous producer of energy, but the man of control is undulatory, in orbit, in a continuous network. Everywhere surfing has already replaced the older sports. Types of machines are easily matched with each type of society—not that machines are determining, but because they express those social forms capable of generating them and using them. The old societies of sovereignty made use of simple machines—levers, pulleys, clocks; but the recent disciplinary societies equipped themselves with machines involving energy, with the passive danger of entropy and the active danger of sabotage; the societies of control operate with machines of a third type, computers, whose passive danger is jamming and whose active one is piracy and the introduction of viruses. This technological evolution must be, even more profoundly, a mutation of capitalism, an already well-known or familiar mutation that can be summed up as follows: nineteenth-century capitalism is a capitalism of concentration, for production and for property. **It therefore erects the factory as a space of enclosure, the capitalist being the owner of the means of production but also, progressively, the owner of other spaces conceived through analogy** (the worker’s familial house, the school). As for markets, they are conquered sometimes by specialization, sometimes by colonization, sometimes by lowering the costs of production. But**, in the present situation, capitalism is no longer involved in production, which it often relegates to the Third World, even for the complex forms of textiles, metallurgy, or oil production. It’s a capitalism of higher-order production.** It no longer buys raw materials and no longer sells the finished products: it buys the finished products or assembles parts. What it wants to sell is services and what it wants to buy is stocks. **This is no longer a capitalism for production but for the product, which is to say, for being sold or marketed. Thus it is essentially dispersive, and the factory has given way to the corporation.** The family, the school, the army, the factory are **no longer the distinct analogical spaces that converge towards an owner—state or private power—but coded figures—deformable and transformable—of a single corporation that now has only stockholders**. Even art has left the spaces of enclosure in order to enter into the open circuits of the bank. The conquests of the market are made by grabbing control and no longer by disciplinary training, by fixing the exchange rate much more than by lowering costs, by transformation of the product more than by specialization of production. Corruption thereby gains a new power. Marketing has become the center or the “soul” of the corporation. We are taught that corporations have a soul, which is the most terrifying news in the world. The operation of markets is now the instrument of social control and forms the impudent breed of our masters. Control is short-term and of rapid rates of turnover, but also continuous and without limit, while discipline was of long duration, infinite and discontinuous. Man is no longer man enclosed, but man in debt. It is true that capitalism has retained as a constant the extreme poverty of three-quarters of humanity, too poor for debt, too numerous for confinement: control will not only have to deal with erosions of frontiers but with the explosions within shanty towns or ghettos.

#### Distinctions between the private and public sphere do not exist-- the affirmative’s theorization of such is the latest tactic of control society to modulate the enunciation of behavior and subjectivity through fascist mechanisms.

Hardt 98 [Michael Hardt is an American political philosopher and literary theorist. Hardt is best known for his book Empire, which was co-written with Antonio Negri. It has been praised by Slavoj Žižek as the "Communist Manifesto of the 21st Century". He is currently a professor of literature at Duke University, The Global Society of Control on JSTOR, Fall 1998, Discourse Vol. 20, No. 3, Gilles Deleuze: A Reason to Believe in this World, https://www.jstor.org/stable/41389503, 12-14-2021 amrita]

There Is No More Outside The passage from disciplinary society to **the society of control is characterized** first of all **by the collapse of** the walls **that defined** the **institutions. There is progressively less distinction,** in other words, between inside and outside. This is really part of a general change in the way that power marks space in the passage from modernity to postmodernity. Modern sovereignty has always been conceived in terms of a (real or imagined) territory and the relation of that territory to its outside. Early modern social theorists, for example,from Hobbes to Rousseau, understood the civil order as a limited and interior space that is opposed or contrasted to the external order of nature. The bounded space of civil order, its place, is defined by its separation from the external spaces of nature. In an analogous fashion, the theorists of modern psychology understood drives, passions, instincts, and the unconscious metaphorically in spatial terms as an outside within the human mind, a continuation of nature deep within us. Here the sovereignty of the Self rests on a dialectical relation between the natural order of drives and the civil order of reason or consciousness. Finally, modern anthropology's various discourses on primitive societies often function as the outside that defines the bounds of the civil world. **The process of modernization**, then, in all these varied contexts, **is the internalization of the outside,** that is, the civilization of nature. In the postmodern world, **however, this dialectic** between inside and outside, between the civil order and the natural order, **has come to an end**. This is one precise sense in which the contemporary world is postmodern. "Postmodernism," Fredric Jameson tells us, "is what **you have when the modernization process is complete and nature is gone for good**."3 Certainly we continue to have forests and crickets and thunderstorms in our world, and we continue to understand our psyches as driven by natural instincts and passions, but we have no nature in the sense that these forces and phenomena are no longer understood as outside, that is, they are not seen as original and independent of the artifice of the civil order. In a postmodern world all phenomena and forces are artificial, or as some might say, part of history. The modern dialectic of inside and outside **has been replaced by a play of degrees** and intensities, of hybridity **and** artificiality. Secondly, the outside **has also declined in terms of** a rather different modern **dialectic that defined the relation between public and private in liberal political theory**. The **public spaces** of modern society, **which constitute the place of liberal politics, tend to disappear** in the postmodern world. According to the liberal tradition, the modern individual, at home in its private spaces, regards the public as its outside. The outside is the place proper to politics, where the action of the individual is exposed in the presence of others and there seeks recognition. In the process of postmodernization, however, **such public spaces are increasingly becoming privatized**. The urban landscape is shifting from the modern focus on the common square and the public encounter to the closed spaces of malls, freeways, and gated communities. The architecture and urban planning of megalopolises such as Los Angeles and Sao Paulo have tended to limit public access and interaction as well as limited chance encounters of different social subjects, creating rather a series of protected interior and isolated spaces. Alternatively, consider how the banlieu of Paris has become a series of amorphous and indefinite spaces that promote isolation rather than any interaction or communication. **Public space has been privatized to such an extent** that **it no longer makes sense to understand social organization in terms of a dialectic between private and public spaces**, between inside and outside. The **place of modern liberal politics has disappeared** **and thus from this optic our postmodern and imperial society** **is characterized by a deficit of the political**. In effect, the place of politics has been deactualized. In this regard, Guy Debord's analysis of the society of the spectacle, thirty years after its composition, seems ever more apt and urgent.4 In postmodern society the spectacle is a virtual place, or more accurately, a non-place of politics. The **spectacle is at once unified** and diffuse in such a way that **it is impossible to distinguish** any inside from outside - the natural from the social, **the private from the public**. The **liberal notion of the public**, the place outside where we act in the presence of others, **has been** both **universalized** (because we are always now under the gaze of others, monitored by safety cameras) **and sublimated** or de-actualized in the virtual spaces of the spectacle. The end of the outside is the end of liberal politics. Finally, from the perspective of Empire, or rather from that of the contemporary world order, there is no longer an outside **also in a** third sense, a properly **military sense**. When Francis Fukuyama claims that the contemporary historical passage is defined by the end of history, he means that the era of major conflicts has come to an end: in other words, sovereign power will no longer confront its Other, it will no longer face its outside, but rather progressively expand its boundaries to envelop the entire globe as its proper domain.5 The history of imperialist, inter-imperialist, and anti-imperialist wars is over. The end of that history has ushered in the reign of peace. Or really, we have entered the era of minor and internal conflicts. Every imperial war is a civil war, a police action- from Los Angeles and Granada to Mogadishu and Sarajevo. **In fact, the separation of tasks between the external and internal arms of power (between the army and the police, the CIA and the FBI) is increasingly vague and indeterminate.** In our terms the end of history that Fukuyama refers to is the end of the crisis at the center of modernity, the coherent and defining conflict that was the foundation and raison d'etre for modern sovereignty. History has ended precisely and only to the extent that it is conceived in Hegelian terms- as the movement of a dialectic of contradictions, a play of absolute negations and subsumption. The binaries that defined modern conflict have become blurred. The Other that might delimit a sovereign Self has become fractured and indistinct, and there is no longer an outside that can bound the place of sovereignty. At one point in the Cold War, in an exaggerated version of the crisis of modernity, every enemy imaginable (from women's garden clubs and Hollywood films to national liberation movements) could be identified as communist, that is, part of the unified enemy. The outside is what gave the crisis of the modern and imperialist world its coherence. **Today it is increasingly difficult for the ideologues of the United States to name the enemy, or rather there seem to be minor and elusive enemies everywhere.6 The end of the crisis of modernity has given rise to a proliferation of minor and indefinite crises in the imperial society of control, or as we prefer, to an omni-crisis.** It is useful to remember here that the capitalist market is one machine that has always run counter to any division between inside and outside. The capitalist market is thwarted by exclusions and it **thrives by including always increasing numbers within its sphere**. Profit can only be generated through contact, engagement, interchange, and commerce. The realization of the world market would constitute the point of arrival of this tendency. In its ideal form there is no outside to the world market: the entire globe is its domain.7 We might use the form of the world market as a model for understanding the form of imperial sovereignty in its entirety. Perhaps, just as Foucault recognized the panopticon as the diagram of modern power and disciplinary society, the world market might serve adequately (even though it is not an architecture; it is really an anti-architecture) as the diagram of imperial power and the society of control.8 The striated space of modernity constructs places that are continually engaged in and founded on a dialectical play with their outsides**. The space of imperial sovereignty, in contrast, is smooth. It might appear that it is free of the binary divisions of modern boundaries, or striation, but really it is criss-crossed by so many fault lines that it only appears as a continuous, uniform space. In** this sense, the clearly defined crisis of modernity gives way to an omnicrisis in the imperial framework. In this smooth space of empire, there is no place of power- it is both everywhere and nowhere. The empire is an u-topos , or rather a non-place.

#### This may seem innocuous, but it creates a war on difference, a new totalitarian model that is premised upon reactive orientations to desire, leaving only a simulation of political participation creating fascism-- that turns case and holds root cause.

Karatzogianni and Robinson 13. [Athina Karatzogianni is a Senior Lecturer in Media and Communication at the University of Leicester (UK), Andrew Robinson is an independent researcher and writer, “Schizorevolutions vs. Microfascisms: A Deleuzo-Nietzschean Perspective on State, Security, and Active/Reactive Networks,” Selected Works, July 2013, http://works.bepress.com/athina\_ karatzogianni, 8-17-2019, amrita]

Thesis 2: The threatened state transmutes into the terror state. The return of state violence from the kernel of state exceptionalism is a growing problem. It is grounded on a reaction of the terrified state by conceiving the entire situation as it is formerly conceived specific sites of exception and emergency (c.f. Agamben, 1998, 2005). New forms of social control directed against minor deviance or uncontrolled flows are expanding into a war against difference and a systematic denial of the ‘right to have rights’ (Robinson, 2007). The project is not simply an extension of liberal-democratic models of social control, but breaks with such models in directly criminalizing nonconformity from a prescribed way of life and attempting to extensively regulate everyday life through repression. This new repressive model, expressing a kind of neo-totalitarianism, should be taken to include such measures and structures as the rise of gated communities, CCTV, RFID, ID cards, ASBOs, dispersal zones, paramilitary policing methods, the ‘social cleansing’ of groups such as homeless people and street drinkers from public spaces, increasing restrictions on protests and attacks on ‘extremist’ groups, the use of extreme sentencing against minor deviance, and of course the swathe of “anti-terrorism” laws which provide a pretext for expanded repression. This increasingly vicious state response leads to extremely intrusive state measures. The magazine Datacide analyses the wave of repression as ‘the real subsumption of every singularity in the domain of the State. From now on if your attributes don't quite extend to crime, a judge's word suffices to ensure that crime will reach out and embrace your attributes’ (Hyland n.d.). To decompose networks, the state seeks to shadow them ever more closely. The closure of space is an inherent aspect of this project of control. While open space is a necessary enabling good from the standpoint of active desire, it is perceived as a threat by the terrified state, because it is space in which demonised Others can gather and recompose networks outside state control. Hence, for the threatened state, open space is space for the enemy, space of risk. Given that open space is in contrast necessary for difference to function (since otherwise it is excluded as unrepresentable or excessive), the attempts to render all space closed and governable involve a constant war on difference which expands ever more deeply into everyday life. As Guattari aptly argues, neoliberal capitalism tends to construe difference as unwanted ‘noise’ (1996: 137). Society thus becomes a hothouse of constant crackdowns and surveillance, which at best simulates, and at worst creates, a situation where horizontal connections either cannot emerge or are constantly persecuted. Theories such as those of Agamben and Kropotkin show the predisposition of the state to pursue total control. But why is the state pursuing this project now? To understand this, one must recognise the multiple ways in which capitalism can handle difference. Hence, there are two poles the state can pursue, social-democratic (adding axioms) or totalitarian (subtracting axioms), which have the same function in relation to capitalism, but are quite different in other regards. State terror involves the replacement of addition of axioms (inclusion through representation) with subtraction of axioms (repression of difference). This parallels the distinction between ‘hard’ and ‘soft’ power in international relations. Crucially, ‘hard’ power is deflationary (Mann 2005: 83-4). While ideological integration can be increased by intensified command, ‘soft’ power over anyone who remains outside the dominant frame is dissipated. Everyday deviance becomes resistance because of the project of control which attacks it. It also becomes necessarily more insurrectionary, in direct response to the cumulative attempts to stamp it out through micro-regulation. What the state gains in coercive power, it loses in its ability to influence or engage with its other. But the state, operating under intense uncertainty and fear, is giving up trying to seem legitimate across a field of difference. A recent example of this concerns the treatment of whistleblowers: Bradley [Chelsea] Manning and by extent the publisher Julian Assange in the WikiLeaks case (for a discussion of affect see Karatzogianni, 2012) and Edward Snowden in relation to the recent revelations about NSA surveillance program PRISM (Poitras and Greenwald’s video Interview with Edward Snowden, 9 June 2013). This is not to say that it dispenses with articulation. It simply restricts it tautologically to its own ideological space (Negri 2003: 27). Legitimation is replaced by information, technocracy and a simulation of participation (Negri 2003: 90, 111.). There is a peculiarly close relationship between the state logic of command and the field of what is variously termed ‘ideology’ (in Althusser), ‘mythology’ (in Barthes) and ‘fantasy’ (in Lacan): second- order significations embedded in everyday representations, through which a simulated lifeworld is created, in which people live in passivity, creating their real performative connection to their conditions of existence and bringing them into psychological complicity in their own repression. Such phenomena are crucial to the construction of demonised Others which provides the discursive basis for projects of state control. ‘[Conflict is] deflected... through the automatic micro-functioning of ideology through information systems. This is the normal, ‘everyday’ fascism, whose most noticeable feature is how unnoticeable it is’ (Negri 1998a: 190). In denial of generalisable rights, the in-group defines social space for itself and itself alone. The result is a denial of basic dignity and rights to those who fall outside "society", who, in line with their metaphysical status, are to be cast out, locked away, or put beyond a society defined as being for "us and us only" (the mythical division between social and anti-social). The neo-totalitarian state resurrects the tendency to build a state ideology, but this ideology is now disguised as a shared referent of polyarchic parties and nominally free media. Failing to think in statist terms is no longer any different from criminal intent. Romantically crossing an airport barrier for a goodbye kiss is taken as a major crime, for the state, being terrified, responds disproportionately; the romantic is blamed for producing this response (Baker and Robins, 2010). He should have thought like the state to begin with, and not corrupted its functioning with trivialities such as love. Such is the core of the terror-state: constant exertion of energy to ward off constant anxiety, at the cost of a war on difference. Networks under Threat - Network Terror Thesis 3: Networked movements escape the state-form. Thesis 4: State terror targets and terrifies movements. Thesis 5: Movement terror is an outcome of state terror against movements. At the intersection of the threatened state and the sources of its anxiety lies the collapse of marginal integration and ‘addition of axioms’ in neoliberalism. Capitalism has been clenching its fists on the world for some time, and many spaces and people are falling through its fingers. The formal sector of the economy is shrinking, leaving behind it swathes of social life marginalized from capitalist inclusion. Much of the global periphery is in effect being forcibly ‘delinked’ from the world economy as inclusion through patronage is scaled down due to neoliberalism. For instance, ‘Sub-Saharan Africa has almost dropped out of the formal international economy’ (Mann, 2005: 55-6). Religious, militia and informal economic organisations have replaced the state on the ground across swathes of Africa, and ‘whole regions have now become virtually independent, probably for the foreseeable future, of all central control’ (Bayart, Ellis and Hibou, 1999: 19-20). These spaces are the locus of the state’s fear of ‘black holes’ where state power breaks down and insurgents can flourish (Korteweg, 2008; Innes, 2008). On a human scale, exclusion, or ‘forced escape’, is even more noticeable. Arif Dirlik argues that capitalism controls enough resources that it no longer needs to control the majority of people; it can simply ignore and exclude four-fifths of the world (1994: 54-5). William Robinson refers to a new stratum of ‘supernumeraries’ in countries like Haiti, who are completely marginalised from production, useless to capitalism and prone to revolt (1996: 342, 378). This became even more evident with the extreme recent seismic event in January 2010 a paradigmatic failure to save lives. This stratum is another locus of the state’s fears. Such people are in Žižek’s terms the ‘social symptom’ of the current world order, ‘the part which, although inherent to the existing universal order, has no ‘proper place’ within it’ (Žižek, 1999, p. 224). Hence, as Caffentzis puts it, ‘Once again, as at the dawn of capitalism, the physiognomy of the world proletariat is that of the pauper, the vagabond, the criminal, the panhandler, the refugee sweatshop worker, the mercenary, the rioter’ (1992: 321). Viewed in affirmative terms, these excluded sites and peoples are associated with the network form. The last few decades have seen a proliferation of network-based movements -- some emancipatory, others less so -- drawing their membership from marginalised groups and creating autonomous zones in marginal spaces. In the South, such movements often grow out of the everyday networks of survival which ‘provide an infrastructure for the community and a measure of functional autonomy’ (Hecht and Simone, 1994: 14-15; c.f. Lomnitz, 1977; Chatterjee 1993). The discontented excluded lie at the heart of today’s asymmetrical wars. For instance, Giustozzi has investigated the origins of the Pakistani Taleban, revealing that it flourishes mainly among young people who do not receive ‘peace, income, a sense of purpose, a social network’ from the established structure of tribal power (Giustozzi 2007: 39), while Watts (2007) has referred to what is known locally as the ‘restive youth problem’ as central to the conflict in the Niger Delta. One can also refer here to mass protest revolts such as those in Greece and the French banlieues, and spectacular revolts against state power in which police stations and state symbols are attacked, such as the Boko Haram revolt in Nigeria and the uprising of Primero Comando da Capital (PCC) in Sao Paolo. Ignoring for the moment the distinctions among such movements, their vitality can clearly be traced to their networked and marginal loci. Resisting or eluding the terror-state’s grab for space, horizontal networks flow around the state’s restrictions, moving into residual unregulated spaces, gaps in the state’s capacity to repress, across national borders, or into the virtual. Repression drives dissent from open to clandestine forms, creating a field of diffuse resistance and deviance, which ‘returns’ as intractable social problems and inert effects**.**

#### Endorse community-based radical organizing built around collective solidarity—the plan is doomed to failure if it is tied to discussions of Space has the radical potential to be different and you should affirm a subversion of their politic—no perms.

Battaglia 12 [Debbora Battaglia is a professor at Mount Holyoke College. “Arresting hospitality: the case of the 'handshake in space,” The Journal of the Royal Anthropological Institute, Vol. 18, <https://www.jstor.org/stable/41506671>., 12-14-2021 amrita]

Towards an extra-territorial ethics of hospitality While acknowledging that anthropologists of play and ludic limits could have a field day with some of this paper's ethnographic material,26 I have tried to do something more far-reaching here – seeking in the complex exchanges of various natural, techno- cultural, and social force-fields the features of an extra-territorial ethics of hospitality, for shaping possible nature-culture futures on the ground. Circling by degrees around 'handshake' scenarios that are basically all about social relations crafted in small actions of non-sovereignty, I seek to posit the diplomatic strategy of suspending welcome as an emblematic action of denying power claimed in the name of territory (Boden)27: Apollo and Soyuz may have sourced to state structures and geopolitical security concerns, but the project could go beyond these. Denying rights to hosting, authoring, or authorizing hospitality other than mutually (as we saw in the hard fact of androgynous technology and manoeuvres for mutual rescue), astronauts and cosmonauts replaced sovereign claims to space with their own relational code — one in which 'the welcomed guest is treated as a friend or ally, as opposed to the stranger treated as an enemy (friend/enemy, hospitality/hostility)' (Derrida 2000: 4). But the ethnography exceeds Derrida's anthropocentrism. Because both spacecraft and humans are as much of space as in it, we are moved to appreciate the value of cutting 'guest' and 'host' free to engage nature-culture relations. To take up sidelong the point that Agamben (2005) carries forward from Carl Schmitt for defining sovereignty, space-as-itself is here the only possible sovereign power: that to which exceptions to human laws source. It is in this sense that the cosmonauts and astronauts of Apollo-Soyuz were acting both humbly and boldly as 'little gods' who would deny a politics of territory a place of privilege in space or on Earth, even as the nations to which they owed their allegiance committed to this value officially in rhetorics of colonization and/or conquest. It is thus that space creates space for a God concept in the company of which both religious orthodoxies and orthodox science can only be uncomfortable (cf. Derrida 2002). It follows that forms of civility become visible in this instance as protentive actions for laws not only in suspension but in submission to space-as-itself — the extreme testing-ground of laws beyond arbitrage, by which the values of the nominal are not only appreciated but strongly felt, as fieldworking astronauts' and cosmonauts' first-person narratives show. Long-duration space station missions enabled by the techno-logical advances of ASTP will in future lend their micro-spaces more readily to narratives and images of sovereignty, including the sovereignty of property. But not in the spacetime of the welcome withheld. It is because purposeful ruptures of nominal conduct interfere with nature-culture business-as-usual that hospitality can abide there, as it were in the aporia. Beyond being merely tolerated, gifts of disruption within insider space communities seized the moment for ‘worlding’ differently than by fixed rules of engagement. Bruno Latour writes in War of the worlds: what about peace?, ‘Modernism distinguishes itself from its successor—what should it be called? "Second modernity"? ... — in this one small respect: from now on the battle is about the making of the common world and the outcome is uncertain. That's all. And that's enough to change everything’ (2002: 33, emphasis added). Derrida takes this anthropological turn when he speaks of hospitality arising not from 'the love of man as a sentimental motive' — it is not about philanthropy — but (quoting Kant) from 'the right of a stranger not to be treated with hostility when he arrives on someone else's territory'. Hospitality is to be thought of as a universal ‘obligation, a right, and a duty all regulated by law’ (2000: 4).28 And this is more or less precisely stated by the USSR Command Centre spokesperson in a post-flight statement to the world press: The flight was conducted in accordance with an agreement between the Union of Soviet Socialist Republics and the United States of America. This document foresaw the execution of projects for the creation of joint means of motion and docking of the Soviet and American manned spacecraft and stations, with the purpose of increasing the safety of spaceflights and securing the possibility of realizing in the future joint scientific experiments.29

## 2

#### CP: Ban the appropriation of outer space by private entities through adding in an amendment to article two of the outer space treaty to clarify inconsistencies

Tronchetii 7[Fabio Tronchetti is a professor at the International Institute of Air and Space Law, Leiden University, The Netherlands, 2007, <https://iislweb.org/docs/Diederiks2007.pdf>, 12-15-2021 amrita]

ARTICLE II OF THE OUTER SPACE TREATY: A MATTER OF DEBATE The legal content of Article II of the Outer Space Treaty is one of the most debated and analysed topic in the field of space law. Indeed, several interpretations have been put forward to explain the meaning of its provisions. Article II states that: “Outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means”. **The text of Article II represents** the final point of a process, formally initiated with Resolution 1721, aimed at conferring to outer space the status of res communis omnium, namely a thing open for the **free exploration** and use by all States **without the possibility of being appropriated**. By prohibiting the possibility of making territorial claims over outer space or any part thereof based on use or occupation, Article II **makes clear that** the customary procedures of **i**nternational **law allowing** subjects to obtain **sovereignty rights over un-owed lands**, namely discovery, occupatio and effective possession, **do not apply to** outer **space.** This prohibition was considered by the drafters of the Outer Space Treaty the best guarantee for preserving outer space for peaceful activities only and for stimulating the exploration and use of the space environment in the name of all mankind. What has been the object of controversy among legal scholars is the question of whether both States and private individuals are subjected to the provisions of Article II. Indeed, **while Article II forbids** expressis verbis the national **appropriation by** claims of **sovereignty**, by means of use and occupation or other means of outer space, **it does not** make **a**ny explicit **mention** **to** its **private** appropriation. Relying on this consideration, some authors have argued that the private appropriation of outer space and celestial bodies is allowed. For instance, in 1968 Gorove wrote: “Thus, at present an individual acting on his own behalf or on behalf of another individual or private association or an international organisation could lawfully appropriate any parts of outer space…”6 . The same argument is used today by the enterprises selling extraterrestrial acres. They base their claim to the Moon and other celestial bodies on the consideration that Article II does not explicitly forbid private individuals and enterprises to claim, exploit or appropriate the celestial bodies for profit7 . However, it must be said, that nowadays there is a general consensus on the fact that **both national appropriation and private** property rights **are denied** under the Outer Space Treaty. Several way of reasoning have been advanced to support this view. Sters and Tennen affirm that the argument that Article II does not apply to private entities since they are not expressly mentioned fails for the reason that they do not need to be explicitly listed in Article II to be fully subject to the non-appropriation principle8 . **Private entities are allowed to carry out** space **activities but**, according to Article VI of the Outer Space Treaty, they **must be authorized** to conduct such activities **by the** appropriate **State** of nationality. But if the State is prohibited from engaging in certain conduct, then it lacks the authority to license its nationals or other entities subject to its jurisdiction to engage in that prohibited activity. Jenks argues that “States bear international responsibility for national activities in space; it follows that what is forbidden to a State is not permitted to a chartered company created by a State or to one of its nationals acting as a private adventurer”9 . It has been also suggested that **the prohibition of national** appropriation **implies prohibition of private** appropriation because the latter cannot exist independently from the former10. In order to exist, indeed, private property requires a superior authority to enforce it, be in the form of a State or some other recognised entity. In outer space, however, this practice of State endorsement is **forbidden. Should a State recognise or protect the territorial acquisitions of any of its subjects, this would constitute a form of national appropriation in violation of Article II**. Moreover, it is possible to use some historical elements to support the argument that both the acquisition of State sovereignty and the creation of private property rights are forbidden by the words of Article II. During the negotiations of the Outer Space Treaty, the Delegate of Belgium affirmed that his delegation “had taken note of the interpretation of the non-appropriation advanced by several delegations-apparently without contradiction-as covering both the establishment of sovereignty and the creation of titles to property in private law”11. The French Delegate stated that: “…there was reason to be satisfied that three basic principles were affirmed, namely: the prohibition of any claim of sovereignty or property rights in space…”12. The fact that the accessions to the Outer Space Treaty were not accompanied by reservations or interpretations of the meaning of Article II, it is an evidence of the fact that this issue was considered to be settled during the negotiation phase. Thus, summing up, we may say that **prohibition of appropriation of outer space** and its parts is a rule which **is valid for both private and public entity**. The theory that private operators are not subject to this rule represents a myth that is not supported by any valid legal argument. Moreover, it can be also added that if any subject was allowed to appropriate parts of outer space, the basic aim of the drafters of the Treaty, namely to prevent a colonial competition in outer space and to create the conditions and premises for an exploration and use of outer space carried out for the benefit of all States, would be betrayed. Therefore, **the need to protect the non-appropriative nature o**f outer **space emerges** in all its relevance.

#### The CP competes and is mutually exclusive

#### The case implements the public trust doctrine in which government agencies hold space resources as public trusts and they have sole discretion. I read blue

Pastorius 13 [Claudia Pastorius, J.D., Barry University School of Law, “Law and Policy in the Global Space Industry's Lift-Off,” 2013, *Barry Law Review*, Vol. 19, Issue 1, https://lawpublications.barry.edu/cgi/viewcontent.cgi?article=1007&context=barrylrev, EA]

C. The Public Trust Doctrine

Rooted in Roman law, the public trust doctrine, whereby a state actor holds and manages property in trust for the benefit of the public, is now regularly applied through common law and statutory regulations around the world.280 The origins of the public trust doctrine are found in the Justinian Institute’s declaration that the air, running water, and the seas (and seashores) were common to mankind, and as such, are resources to be protected by the sovereign.281 Virgiliu Pop, a Romanian Space Agency researcher, postulates that the Outer Space Treaty essentially creates a public trust in the agreement by stating: “for the benefit of and in the interest of all countries” in Article I.282 The missing piece of the puzzle, he claims, is the undesignated trustee(s).283 The sovereign or state is traditionally the trustee in a public trust.284

In a public trust holding property ownership rights, the bundle of property rights285 is thus divided between the trustee (the State) and the beneficiaries (the Public).286

There are two co-existing interests to trust lands: the jus publicum which is the public’s right to use and enjoy trust lands; and the jus privatum which is the private property rights that may exist in the use and possession of trust lands. The State may convey the jus privatum to private owners, but this private interest is subservient to the jus publicum, which is the State’s inalienable interest that it continues to hold in the trust land or water.287

The ownership of the property thus remains with the trustee; but, the rights to exclude, use, and enjoy could be allocated to a group, an individual, or an entity.288

The United Nations created a Trusteeship Council in the hopes of applying the common heritage of mankind doctrine, but its operations centered on work with post-war decolonization territories and were suspended in 1994..289 In its inception, it was conceived that the Trusteeship Council would operate as the “trustee of the common heritage of humankind to ensure the necessary coordinated approach to this concern” and manage the jus privatum rights of common heritage properties.290 The board of trustees consisted of: China, France, Russia, the United Kingdom and the United States—the five permanent members of the Security Council.291 Proposals to utilize the Trusteeship Council to address management of “global commons” have made little progress.292 One contributing factor to the ineffectiveness of the Trusteeship Council may be that the political differences between Security Council members often leads to a stalemate in decisionmaking.293

Despite the dissolution of the Trusteeship Council, there are utilitarian reasons why the formation of a trust for outer space resources would minimize economic detriments to all nation-states and optimize economic benefits of outer space development for all, particularly for spacefaring pioneer nations.294 The common heritage of mankind

#### The tronchetti evidence explicitly rejects that states have any capabilities of being trustees – and that by extension private entities CANNOT use resources from mining, celestial bodies, etc. which includes appropiation

## 3

#### Interpretation: Debaters may not specify that an actor ought do anything but claim the appropiation of private space by other entities is unjust. To clairfy, they cannot be extra-topical

#### Unjust

Merriam Webster ND https://www.merriam-webster.com/dictionary/unjust

Log In un·​just | \ ˌən-ˈjəst \ Definition of unjust 1: characterized by injustice : UNFAIR

#### Appropriation means to take possession

Dictionary ND, Dictionary.com, “appropriation”, <https://www.dictionary.com/browse/appropriation>, DD AG

the act of appropriating or aking possession of something, often without permission or consent.

#### Violation:

They choose to defend \_\_\_

#### c. Prefer

#### 1. Limits: Their model allows them to defend an arbitrary combination of article amendments, lawsuits, and other ambiguities which doesn’t create a stasis point for preperation in the resolution. P need to win their model of debate is

#### 2. Research:

#### 3. TVA: Read \_\_\_\_\_ as normal means. That allows for contestation on both sides because you can win what the world of the aff looks like and so can we

#### DTD – k2 deter future abuse

#### NO RVIS – chills theory makes it impossible to go for

## 4

#### CP Text: The United States federal government should provide necessary funding for the National Aeronautics and Space Administration to identify and track at least 90% of near- Earth objects at least 140 meter across, and to develop a strategy for mitigation of near-Earth objects at least 140 meters across determined likely to impact Earth.

#### Mapping is crucial to early warning and mitigating asteroids.

Barbee and Fowler et al 06(Brent William, Aerospace Engineer @ Emergent Space Technologies, and Wallace T., Professor of Aerospace Engineering @ UT-Austin, with George W. Davis and David E. Gaylor, “Optimal Deflection of Hazardous Near-Earth Objects by Standoff Nuclear Detonation and NEO Mitigation Mission Design,” Paper presented at NASA Workshop on Near-Earth Object Detection, Characterization, and Threat Mitigation, 26 June 2006 (Vail, CO). [PDF Online @] http://www.aero.org/conferences/planetarydefense/

resources.html) OP

**Improved techniques and equipment for accurate processing of orbital observation data and orbit propagation are constantly under development**, and this development should be continued. In addition, **systems for detecting and tracking NEOs should be continually upgraded and expanded to minimize the time required to both detect a NEO and determine whether it is a threat. Early warning is the most important ingredient in successful mitigation of a hazardous NEO**.

#### Mitigation prevents extinction.

Barbee and Fowler et al 06 (Brent William, Aerospace Engineer @ Emergent Space Technologies, and Wallace T., Professor of Aerospace Engineering @ UT-Austin, with George W. Davis and David E. Gaylor, “Optimal Deflection of Hazardous Near-Earth Objects by Standoff Nuclear Detonation and NEO Mitigation Mission Design,” Paper presented at NASA Workshop on Near-Earth Object Detection, Characterization, and Threat Mitigation, 26 June 2006 (Vail, CO). [PDF Online @] http://www.aero.org/conferences/planetarydefense/

resources.html) OP

**Hazardous NEO mitigation represents a multi-disciplinary** engineering **design problem** and is best treated with a systems engineering approach. **Finding solutions to this problem will enhance our scientific knowledge of asteroids, comets, and our solar system. It will also enhance our spacecraft technology**. Since Congress has passed legislation requiring NASA to assume responsibility for NEO mitigation, **we recommend that mitigation system testing begin as soon as possible**, starting with standoff nuclear detonation. It is both an honor and challenge for NASA to be tasked with developing such systems. **We hope that they will never be needed, but proving our ability to mitigate the threat posed by hazardous NEOs is necessary to ensure the survival of humankind**.

## Case

#### Allowing states to become trustees means complete asymmetries in definitions of appropriations and leniency – the US basically gives citizens unhindered acceess

Foster 16 – Craig, J.D., University of Illinois College of Law, “EXCUSE ME, YOU’RE MINING MY ASTEROID: SPACE PROPERTY RIGHTS AND THE U.S. SPACE RESOURCE EXPLORATION AND UTILIZATION ACT OF 2015”, *JOURNAL OF LAW, TECHNOLOGY & POLICY*, No. 2, page 428-430, http://illinoisjltp.com/journal/wp-content/uploads/2016/11/Foster.pdf

There are many reasons to be excited about the prospect of mining resources from space. Hopes are high that these mining efforts will provide an economic boon by producing jobs and injecting more money into the economy. 214 Additionally, the negative impact of mining natural resources on Earth is widely reported215 and might be mitigated by space mining. If mining precious resources from space can minimize the burden on Earth, then this would lend even greater support for asteroid mining. Finally, little enchants the human mind and propels innovation more than sending people and manmade objects into space. For good reason, there is much enthusiasm about the prospect of space mining. On the other hand, it is troublesome to some that private, commercial entities will be paving the way and making up many of the rules as they go. Might this lead to repeating many of the mistakes humans have made on Earth? Might there be unforeseen problems that could spell trouble if mining efforts are not properly regulated? The answer to these questions is likely “yes” as well. It will be important in the coming years to balance the former excitement against the latter caution. Space might seem limitless and impossible to affect in any significant fashion; but, history must be a major voice for the spacemining industry.216 It must be remembered that humans can make an impact that will be felt for generations to come. Thus, it will be important that lawmakers and the international community be as proactive as possible—both in outlining property rights and protecting the final frontier from being harmed by an industry that might become overzealous if left unchecked. Specifically, it will be vital for countries to enter into some sort of international agreement. One option is to create an agreement similar to UNCLOS, which would regulate how individual states and their citizens interact with resources mined from space.217 Such an agreement should recognize not only the property rights of the extracting commercial entities but also the rights of non-spacefaring countries to benefit from the minerals as well. This might include the creation of an international body, much like the ISA, that will ensure that the interests of all nations are maintained by distributing funds and technology to less wealthy or non-spacefaring nations. The U.S. would do well to help create and ratify such an agreement— something they have failed to do with UNCLOS. If the U.S. and other countries are uneasy about entering into such a restrictive agreement, they might also consider an international regulatory body and scheme much like the one used for satellites. The International Telecommunications Union (ITU) is a United Nations agency that, among other services, provides the international community with uniform satellite orbit oversight and regulatory guidance.218 Currently, 193 countries follow the ITU regulations and utilize their services, which have been likened to domain name registration.219 In the same way, spacefaring countries could form an international body that helps create and maintain a uniform space-mining legal framework.220 Without some sort of international framework as described above, the U.S. and other space-mining countries leave themselves open to great conflict and will be required to patch together a multitude of treaties between themselves as problems inevitably arise.221 V. CONCLUSION The idea of mining resources from celestial bodies is something that has always been relegated to video games and sci-fi movies. But as technology continues to progress at an exponential rate, such mining is starting to come within the realm of possibility. A number of companies are currently creating prospecting technologies that will allow them to determine exactly what an individual asteroid holds. They hope to eventually harvest these resources and sell them for lucrative profits. Fortunately for these companies, the current legal regime governing property rights to space resources is undergoing rapid change at the national level. The U.S. recently passed the Space Resource Exploration and Utilization Act of 2015, which explicitly entitles U.S. citizens to property rights over any space resources they obtain. This is certain to induce confidence in U.S. investors. The situation at the international level is different. Current international space agreements are vague, lacking in consensus, and provide little precedent for ownership of space resources. This has led the international community to move in the direction of creating a better regulatory framework, but this movement is still in discussion stages and is likely to take a while to come to fruition.

#### Disputes and misperceptions regarding domestic laws creatse cascading effects towards space weaponization and an arms race—an international framework solves BUT unilateral action by states causes escalating space wars

Mallick & Rajagopalan 19 - Law Researcher at the High Court of Delhi from 2016 to 2018 and is currently pursuing LL.M in International Law at The Fletcher School of Law and Diplomacy, USA, \*\*Distinguished Fellow and Head of the Nuclear and Space Policy Initiative at Observer Research Foundation. She is also the Technical Adviser to the UN Group of Governmental Experts (GGE) on Prevention of Arms Race in Outer Space (PAROS). (Rajeswari Pillai Rajagopalan, Senjuti Mallick, “If Space is ‘the Province of Mankind’, Who Owns its Resources? The Potential of Space Mining and its Legal Implications”, ORF Occasional Paper No. 182, January 2019, Observer Research Foundation., <https://www.orfonline.org/research/if-space-is-the-province-of-mankind-who-owns-its-resources-47561/>) NAR

The first concern is establishing clear regulations regarding asteroid mining. With an intent to establish clear regulations with respect to asteroid mining and to legalise material extraction from the moon and other celestial bodies by private companies in the US, the US government legalised space mining in 2015 by introducing the US Commercial Space Launch Competitiveness Act, 2015.[xxvii] This move was heartily welcomed by the private companies as it provided legitimacy to their planned activities. Subsequently in 2017, Luxembourg followed suit.[xxviii] While the US has been a spacefaring nation for many decades now, Luxembourg aspires to become a global leader in the nascent race to mine resources in outer space. In the 1980s the tiny European nation arose out of almost nowhere to become a leader in the satellite communications industry; today it is looking to the skies again, hoping to be the Silicon Valley of asteroid mining.[xxix] In the backdrop of a thriving steel industry that faced trade recession during the oil crisis of 1973, Luxembourg is trying to capitalise on the potential of space mining. As Prime Minister Xavier Bettel put it, “We realized it wouldn't be forever, the steel, so we decided to do other things.”[xxx] Similarly, looking beyond oil, the UAE is framing its policy approaches to make advances in two key areas: human space exploration, and commercial activities of resource extraction through mining.[xxxi] The two formal pieces of legislation (passed by the US and Luxembourg) provide an answer to the complex question of ownership in outer space; the two-word answer appears to be, “finders, keepers”. The US Commercial Space Launch Competitiveness Act, 2015 states: “A US citizen engaged in commercial recovery of an asteroid resource or a space resource shall be entitled to any asteroid resource or space resource obtained.”[xxxii] This legislation gives US space firms the right to own, keep, use, and sell the spoils of the cosmos as they deem fit. Luxembourg’s legislation is fairly analogous to the US Act, giving mining companies the right to keep their plunder. However, unlike the US law, Luxembourg’s does not require a company’s major stakeholders to be based in the country to enjoy its safeguards; the only requirement is for that company to have an office in the country.[xxxiii] In 2017, Japan entered into a five-year agreement with Luxembourg for mining operations in celestial bodies. Japan today appears a step closer to realising its objective of asteroid mining with two Japanese rovers, Minerva II-1, of JAXA landing on the surface of the asteroid named Ryugu in September 2018.[xxxiv] Earlier, Portugal and the UAE signed similar cooperation agreements with Luxembourg.[xxxv] Meanwhile, a few other countries—which have been critical of the US and Luxembourg, at the forefront of the space mining efforts**—**have also decided to join the field. The increasingly competitive and contested nature of outer space activities is spurring major spacefaring nations to push the boundaries in their space exploration. Asteroid mining could possibly become the next big thing and is already seeing a race among the space powers. The US and Luxembourg are at the forefront in space resource extraction in terms of the policy frameworks and funding.[xxxvi] Even as the US has clarified that the US Space Act 2015 is being misunderstood and that there is no change in the US policy towards national appropriation of space, the reality is that it has already spurred a major debate**.[xxxvii]** China and Russia are among those countries that are following on the path of the US and Luxembourg in undertaking mining missions in space. According to media reports, Ye Peijian, chief commander and designer of China’s lunar exploration programme has stated that China would send the first batch of asteroid exploration spacecraft around 2020.[xxxviii] Speaking to China’s Ministry of Science and Technology-run newspaper, Science and Technology Daily, Ye said that these asteroids have a high concentration of precious metals, which could rationalise the huge cost and risks involved in these activities as their economic value could run into the trillions of US dollars. Therefore, extraction, mining and transporting them back to Earth through robotic equipment will be a significant activity. Chinese scientists are working on missions to “bring back a whole asteroid weighing several hundred tonnes, which could turn asteroids with a potential threat to Earth into usable resources**.**”[xxxix] Ye was also quoted as saying that China has plans of “using an asteroid as the base for a permanent space station.”**[xl]** Helium mining on the moon is also part of China’s goals.[xli] Russia, for its part, is also responding to the space-mining developments of the last decade. For one, it plans to have a permanent lunar base somewhere between 2015 and 2020 for possible extraction of Helium.[xlii] Even as Russia’s official position on asteroid mining is that it is forbidden under the 1967 OST—which states that space is the “province of mankind”—the Russian industry players are of the view that they must follow the lead taken by the US and Luxembourg.[xliii] In early 2018, the director of the Scientific-Educational Center for Innovative Mining Technologies of the Moscow-based National University of Science and Technology MISIS (NUST MISIS), Pavel Ananyev, spoke about the Russian ambitions and proposed activities including space drilling rigs, water extraction on the Moon and 3D printers at space stations.[xliv] Russia’s private space companies including Dauria Aerospace, one of the first Russian private space companies, also hold the opinion that they must go forward in the same direction and call for a larger space to private sector to engage in extracting space resources.[xlv] Moscow may not have yet actively pursued space mining and resource extraction, but it is likely to pick up pace in the coming years alongside global efforts. Moscow clearly has a capacity gap in terms of funding because its earlier plans to have a permanent base in the Moon by 2015 is yet to happen. India, too, has ambitions in extraterrestrial resource extraction. In fact, a year after the US legislation, Prabhat Ranjan, executive director of Technology Information, Forecasting and Assessment Council (TIFAC), a policy organisation within the Department of Science and Technology, made a case for India to push ahead with lunar and asteroid mining. He said, “Moon is already being seen as a mineral wealth and further one can go up to the asteroids and start exploiting this. This can be a big game changer and if India doesn’t do this, we will lag behind.”[xlvi] More recently, Dr. K Sivan, Chairman of the country’s civil space organisation, Indian Space Research Organisation (ISRO), talked about ISRO’s plans for helium-3 extraction and said, “the countries which have the capacity to bring that source from the moon to Earth will dictate the process. I don’t want to be just a part of them, I want to lead them.”[xlvii] However, gaining proficiency in such missions is not easy – the NASA and ESA (the European Space Agency) have been discussing these possibilities for a longer time, albeit quietly. The ISRO Chairman’s response was characterised by an Indian commentator as “aspirational” and “emotional”, clearly conceding that the country’s technological wherewithal is yet to be adequate.[xlviii] Importantly, it is not clear how the legal and regulatory aspects of space mining operations are being dealt with. There was one instance, though, when Luxembourg and Japan in a joint press statement said, “The exchange of information may cover all the issues of the exploration and commercial utilization of space resources, including legal, regulatory, technological, economic, and other aspects.”[xlix] Whether such legalisation is truly legal is arguable. Space Mining: Legal or Not? The Outer Space Treaty (OST) of 1967, considered the global foundation of the outer space legal regime, along with the other four associated international instruments have provided the fundamental basis for outer space activities by prohibiting certain activities and emphasising aspects such as the “common heritage of mankind”. These agreements have been useful in highlighting the global common nature of outer space. At the same time, however, they have been insufficient and ambiguous in providing clear regulations to newer space activities such as asteroid mining. Based on the premise of ‘res communis’, the magna carta of space law, the OST, illustrates outer space as “the province of all mankind”.[l] Under Article I, States are free to explore and use outer space and to access all celestial bodies “on the basis of equality and in accordance with international law.”[li] Although the OST does not explicitly mention “mining” activities, under Article II, outer space including the Moon and other celestial bodies are “not subject to national appropriation by claim of sovereignty” through use, occupation or any other means.[lii] Furthermore, the Moon Agreement, 1979, not only defines outer space as “common heritage of mankind” but also proscribes commercial exploitation of planets and asteroids by States unless an international regime is established to govern such activities for “rational management,” “equitable sharing” and “expansion of opportunities” in the use of these resources.[liii] Slipping conveniently through the loophole in the OST, both the US and Luxembourg have authorised companies to claim exclusive ownership over extracted resources (but not of the asteroid itself). Proponents argue that since no sovereign nation is actually asserting rights over an area of outer space, instead, it is only a private unit claiming rights over singular resources, the treaty norm, “national appropriation by claim of sovereignty”, is not being violated. In the words of renowned space lawyer, Frans von der Dunk, “In terms of the law, yes it’s true that no country can claim any part of outer space as national territory — but that doesn’t mean private industry can’t mine resources.”[liv] Quoting reference from maritime law, Luxembourg regards space resources as appropriable akin to fish and shellfish, but celestial bodies and asteroids are not, just like the high sea. It is noteworthy that out of the only 18 nations that have ratified the Moon Agreement,[lv] none are major spacefaring nations, thereby giving themselves a convenient leeway to not abide by the same. These unilateral initiatives have set off a critical response from the international community. Applying literal interpretation of the OST, there is certainly room to construe that space mining may be legal, compared to the Moon Agreement whose prohibition is absolute. However, taking into consideration the letter and spirit of the OST, strengthened by the Moon Agreement, the argument that “national appropriation” only extends to appropriation of territory and not appropriation of resources is a far reach. That resource extraction is contemplated, albeit implicitly, in the OST, is nothing but logical. Not only have such claims of possessory rights not been recognised in the past, there is also global consensus regarding its illegality.[lvi] It therefore forms a part of customary international law, despite the Moon Agreement not having been widely ratified. In this light, the legalisation of space mining is a sheer violation of the elemental principles of international space law. Yet, there is no clarity on what activity is allowed and what is prohibited in outer space under the existing law.[lvii] There is ambiguity around most issues—from “who would license and regulate asteroid mining operations” to the legality of these activities as per the existing international space law.[lviii] When comparing it to the law of the seas, resource appropriation in the high seas and deep seabed is governed by the United Nations Convention on the Law of the Sea (UNCLOS), 1982, and that in Antarctica, as per the Protocol on Environmental Protection to the Antarctic Treaty, 1991. While the former is strictly regulated under Part XI of UNCLOS, the latter is completely forbidden but for scientific purposes. The law of the sea argument—“owning the fish, not the sea”—cannot be applied to outer space primarily because fish are living resources that can reproduce and therefore are renewable. Outer space resources, on the other hand, are depletable: once harvested, they cannot be replenished. The analogy with fish and seas, therefore, is not a fair one and its transposition to outer space and celestial bodies would be inaccurate. Perhaps a more comparable regime is the deep seabed, which contemplates property rights over mineral extraction. The utilisation and ownership of the deep seabed’s resources are exclusively structured around the International Seabed Authority (ISA), which is responsible for organising, carrying out and controlling all activities in the seabed.[lix] Not only must State parties seek sanction from the ISA before beginning resource exploitation, but the fiscal benefits from seabed mining must also be shared among all.[lx] Evidently, even the UNCLOS upholds State ownership and fair distribution over individual ownership and self-centred gains.[lxi] By allowing private ownership, the US and Luxembourg are once again in contravention of the very same law they are relying on. The touchstone principle, “province of all mankind” is also being defeated. Therefore, to even reap the limited benefits as under UNCLOS, at least the derivation must be made alike. This argument too falls flat. The Way Ahead Undoubtedly, growing technological adeptness has made space mining inevitable and, therefore, the question is no longer “if” but “when”. Nevertheless, a scenario where companies can, solely based on domestic laws, steadily exploit mineral resources in outer space, would be universally unacceptable. Minus regulations, the realisation of space exploitation will create great disparity between nations and disrupt dynamics of the world economy. Regulations are particularly important in the context of the space debris problem. We definitely do not wish for a future, befittingly described by renowned engineer and inventor Graham Hawkes, thus: “Space exploration promised us alien life, lucrative planetary mining, and fabulous lunar colonies. News flash, ladies and gents: Space is nearly empty. It’s a sterile vacuum, filled mostly with the junk we put up there.”[lxii] Therefore, it is extremely important that resource appropriation is carried out in an ethical manner, without interrupting safe and secure access to outer space, simultaneously allowing all countries a share in the proceeds. Technological advances and financial readiness are pushing both, states and non-state players towards new ventures in outer space. Yet, the rules of engagement especially dealing with the new commercial activities are far from ideal. There is a clear and urgent need to debate and come up with either a new regulation or accommodate the space mining activities within the existing international legal measures. Experts have articulated that these could possibly be addressed under the existing property law principles or old mining law principles.[lxiii] However, given the scale of activities that states and non-state parties will engage in, the ability of the existing regime to address space mining could be highly inadequate. The second option would be to develop a new instrument including an institutional architecture that would set out the parameters for activities related to resource extraction and space mining. Since there are a good number of commercial players playing a formidable role in asteroid mining, there has to be space for commercial players in the new gig, which might be a big departure from the earlier era institutions that saw states being the sole authority in regulating activities in outer space. A clear role for commercial players has been articulated for some time but the global space community has yet to reach a consensus in how they can be incorporated into the global governance debates. The apprehension on the part of a number of states is driven by the fact that private sector participation is still largely a western phenomenon. This trend may be undergoing change in other parts of the world but until there is a sizeable private sector community in other major spacefaring powers, there is a fear that the western bloc of countries may stand to gain from the industry being represented in the global governance debates. A third possible option is to get a larger global endorsement of the Moon Treaty, which highlights the common heritage of mankind. The Moon Treaty is important as it addresses a “loophole” of the OST “by banning any ownership of any extraterrestrial property by any organization or private person, unless that organization is international and governmental.”[lxiv] But the fact that it has been endorsed only by a handful of countries makes it a “failure” from the international law perspective.[lxv] Nevertheless, efforts must be made to strengthen the support base for the Moon Agreement given the potential pitfalls of resource extraction and space mining activities in outer space. Signatories to the Moon Treaty can take the lead within multilateral platforms such as the UN to debate the usefulness of the treaty in the changed context of technological advancements and new geopolitical dynamics, and potentially find compromises where there are disagreements. Pursuing a collective approach is ideal. An example is UNCLOS, which demonstrates that the international society possesses the capability of regulating mining quarters deemed to be the “province of mankind”. However, a sui generis legal framework must be crafted because the difference between the marines and outer space and their resources is wide, and the regulations are too region-specific to permit a superimposition of the oceanic regime to outer space. A sound legal environment will protect both the company performing operations and its beneficiaries, while ensuring even-handed resource allocation. In addition, regulations spelling out safety standards and identifying safety zones around mining operations could be useful in ensuring safe and secure operations in outer space. It would be wrong, however, to say that the international community has not debated over this. In fact, one of the main agenda points of the fifty-seventh session of UNCOPUS Legal Committee held in April 2018, was especially devoted to “general exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources.”[lxvi] Upon evaluation, it is clear that countries are not against space mining as such; rather the contentious points are vis-à-vis authorisation, regulation, and where to place responsibility. There also appears to be concurrence regarding the need for international coordination efforts of some sort. Over the last two years, The Hague Space Resources Governance Working Group,[lxvii] established with the purpose of “assess[ing] the need for a regulatory framework for space resource activities, has identified 19 “building blocks”,[lxviii] encompassing subject matters that could be included in such a regulatory framework. Although this leaves a lot of hope for the legitimate mining of space resources, its status is still pending. Also, several questions need to be agreed upon by the global space policy community before the establishment of a framework. First, there must be an agreement among all the space powers on the need for a global governance framework for the use of space resources. This must be followed by detailed deliberations on the scope, mandate and objectives of such a framework. Can and should there be safety zones and exclusive rights be recognised under such a framework and how one can ensure equitable sharing of the resources, and lastly, the role of industries and how the interests of the industry as pioneers in this area can be secured. These are all pertinent questions that need to be considered and debated before an international regime for extraction and use of space resources can be established.[lxix] Even legal space mining activity could have serious impacts in two ways. For instance, any technological spinoffs that a country might have could add to the space weaponisation debate. Two, the erosion of norms with regard to space mining could have a cascading effect on other norms in the same issue area such as weaponisation of space. It is imperative for nations to actively combine their efforts to ensure that this activity transpires in the most globally acceptable manner and not one which stirs anarchism. The ancient Roman maxim, ‘Quod omnes tangit ab omnibus approbatur’ (What touches all must be approved by all) gains due traction in this kind of a scenario. Therefore, a universal activity like space exploration mandates an international guideline; or else, the first haul from mining, instead of earning admiration and exultation, will only be enmeshed in litigation.

#### Mining without international treaties that bind nations equally create tensions with russia and china that escalates

Jamasmie 21 Cecilia Jamasmie [Cecilia has covered mining for more than a decade. She is particularly interested in Corporate Social Responsibility (CSR), Diamonds and Latin America. Cecilia has been interviewed by BBC News and CBC among others and has been a guest speaker at mining conventions, including MINExpo 2016 and the World’s Copper Conference 2018. She is also member of the expert panel on Social License to Operate (SLO) at the European project MIREU (Mining and Metallurgic Regions EU). She holds a Master of Journalism from the University of British Columbia, and is based in Nova Scotia.], 2-2-2021, "Experts warn of brewing space mining war among US, China and Russia," MINING, <https://www.mining.com/experts-warn-of-brewing-space-mining-war-among-us-china-and-russia/> DD AG

A brewing war to set a mining base in space is likely to see China and Russia joining forces to keep the US increasing attempts to dominate extra-terrestrial commerce at bay, experts warn. The Trump Administration took an active interest in space, announcing that America would return astronauts to the moon by 2024 and creating the Space Force as the newest branch of the US military.It also proposed global legal framework for mining on the moon, called the Artemis Accords, encouraging citizens to mine the Earth’s natural satellite and other celestial bodies with commercial purposes. The directive classified outer space as a “legally and physically unique domain of human activity” instead of a “global commons,” paving the way for mining the moon without any sort of international treaty. Spearheaded by the US National Aeronautics and Space Administration (NASA), the Artemis Accords were signed in October by Australia, Canada, England, Japan, Luxembourg, Italy and the United Emirates “Unfortunately, the Trump Administration exacerbated a national security threat and risked the economic opportunity it hoped to secure in outer space by failing to engage Russia or China as potential partners,” says Elya Taichman, former legislative director for then-Republican Michelle Lujan Grisham. “Instead, the Artemis Accords have driven China and Russia toward increased cooperation in space out of fear and necessity,” he writes.Russia’s space agency Roscosmos was the first to speak up, likening the policy to colonialism. “There have already been examples in history when one country decided to start seizing territories in its interest — everyone remembers what came of it,” Roscosmos’ deputy general director for international cooperation, Sergey Saveliev, said at the time.China, which made history in 2019 by becoming the first country to land a probe on the far side of the Moon, chose a different approach. Since the Artemis Accords were first announced, Beijing has approached Russia to jointly build a lunar research base. President Xi Jinping has also he made sure China planted its flag on the Moon, which happened in December 2020, more than 50 years after the US reached the lunar surface.

#### Tensions in space go nucelar

Grego 18 – Laura, Senior Scientist in the Global Security Program at the Union of Concerned Scientists, Postdoctoral Researcher at the Harvard-Smithsonian Center for Astrophysics, PhD in Experimental Physics at the California Institute of Technology, Space and Crisis Stability, Union of Concerned Scientists, 3-19-18, <https://www.law.upenn.edu/live/files/7804-grego-space-and-crisis-stabilitypdf>

Why space is a particular problem for crisis stability For a number of reasons, space poses particular challenges in preventing a crisis from starting or from being managed well. Some of these are to do with the physical nature of space, such as the short timelines and difficulty of attribution inherent in space operations. Some are due to the way space is used, such as the entanglement of strategic and tactical missions and the prevalence of dual-use technologies. Some are due to the history of space, such the absence of a shared understanding of appropriate behaviors and consequences, and a dearth of stabilizing personal and institutional relationships. While some of these have terrestrial equivalents, taken together, they present a special challenge. The vulnerability of satellites and first strike incentives Satellites are inherently fragile and difficult to protect; in the language of strategic planners, space is an “offense-dominant” regime. This can lead to a number of pressures to strike first that don‘t exist for other, better-protected domains. Satellites travel on predictable orbits, and many pass repeatedly over all of the earth‘s nations. Low-earth orbiting satellites are reachable by missiles much less capable than those needed to launch satellites into orbit, as well as by directed energy which can interfere with sensors or with communications channels. Because launch mass is at a premium, satellite armor is impractical. Maneuvers on orbit need costly amounts of fuel, which has to be brought along on launch, limiting satellites‘ ability to move away from threats. And so, these very valuable satellites are also inherently vulnerable and may present as attractive targets. Thus, an actor with substantial dependence on space has an incentive to strike first if hostilities look probable, to ensure these valuable assets are not lost. Even if both (or all) sides in a conflict prefer not to engage in war, this weakness may provide an incentive to approach it closely anyway. A RAND Corporation monograph commissioned by the Air Force15 described the issue this way: First-strike stability is a concept that Glenn Kent and David Thaler developed in 1989 to examine the structural dynamics of mutual deterrence between two or more nuclear states.16 It is similar to crisis stability, which Charles Glaser described as ―a measure of the countries‘ incentives not to preempt in a crisis, that is, not to attack first in order to beat the attack of the enemy,‖17 except that it does not delve into the psychological factors present in specific crises. Rather, first strike stability focuses on each side‘s force posture and the balance of capabilities and vulnerabilities that could make a crisis unstable should a confrontation occur. For example, in the case of the United States, the fact that conventional weapons are so heavily dependent on vulnerable satellites may create incentives for the US to strike first terrestrially in the lead up to a confrontation, before its space-derived advantages are eroded by anti-satellite attacks.18 Indeed, any actor for which satellites or space-based weapons are an important part of its military posture, whether for support missions or on-orbit weapons, will feel “use it or lose it” pressure because of the inherent vulnerability of satellites. Short timelines and difficulty of attribution The compressed timelines characteristic of crises combine with these “use it or lose it” pressures to shrink timelines. This dynamic couples dangerously with the inherent difficulty of determining the causes of satellite degradation, whether malicious or from natural causes, in a timely way. Space is a difficult environment in which to operate. Satellites orbit amidst increasing amounts of debris. A collision with a debris object the size of a marble could be catastrophic for a satellite, but objects of that size cannot be reliably tracked. So a failure due to a collision with a small piece of untracked debris may be left open to other interpretations. Satellite electronics are also subject to high levels of damaging radiation. Because of their remoteness, satellites as a rule cannot be repaired or maintained. While on-board diagnostics and space surveillance can help the user understand what went wrong, it is difficult to have a complete picture on short timescales. Satellite failure on-orbit is a regular occurrence19 (indeed, many satellites are kept in service long past their intended lifetimes). In the past, when fewer actors had access to satellite-disrupting technologies, satellite failures were usually ascribed to “natural” causes. But increasingly, even during times of peace operators may assume malicious intent. More to the point, in a crisis when the costs of inaction may be perceived to be costly, there is an incentive to choose the worst-case interpretation of events even if the information is incomplete or inconclusive. Entanglement of strategic and tactical missions During the Cold War, nuclear and conventional arms were well separated, and escalation pathways were relatively clear. While space-based assets performed critical strategic missions, including early warning of ballistic missile launch and secure communications in a crisis, there was a relatively clear sense that these targets were off limits, as attacks could undermine nuclear deterrence. In the Strategic Arms Limitation Treaty, the US and Soviet Union pledged not to interfere with each other‘s ―national technical means‖ of verifying compliance with the agreement, yet another recognition that attacking strategically important satellites could be destabilizing.20 There was also restraint in building the hardware that could hold these assets at risk. However, where the lines between strategic satellite missions and other missions are blurred, these norms can be weakened. For example, the satellites that provide early warning of ballistic missile launch are associated with nuclear deterrent posture, but also are critical sensors for missile defenses. Strategic surveillance and missile warning satellites also support efforts to locate and destroy mobile conventional missile launchers. Interfering with an early warning sensor satellite might be intended to dissuade an adversary from using nuclear weapons first by degrading their missile defenses and thus hindering their first-strike posture. However, for a state that uses early warning satellites to enable a “hair trigger” or launch-on-attack posture, the interference with such a satellite might instead be interpreted as a precursor to a nuclear attack. It may accelerate the use of nuclear weapons rather than inhibit it. Misperception and dual-use technologies Some space technologies and activities can be used both for relatively benign purposes but also for hostile ones. It may be difficult for an actor to understand the intent behind the development, testing, use, and stockpiling of these technologies, and see threats where there are none. (Or miss a threat until it is too late.) This may start a cycle of action and reaction based on misperception. For example, relatively low-mass satellites can now maneuver autonomously and closely approach other satellites without their cooperation; this may be for peaceful purposes such as satellite maintenance or the building of complex space structures, or for more controversial reasons such as intelligence-gathering or anti-satellite attacks. Ground-based lasers can be used to dazzle the sensors of an adversary‘s remote sensing satellites, and with sufficient power, they may damage those sensors. The power needed to dazzle a satellite is low, achievable with commercially available lasers coupled to a mirror which can track the satellite. Laser ranging networks use low-powered lasers to track satellites and to monitor precisely the Earth‘s shape and gravitational field, and use similar technologies. 21 Higher-powered lasers coupled with satellite-tracking optics have fewer legitimate uses. Because midcourse missile defense systems are intended to destroy long-range ballistic missile warheads, which travel at speeds and altitudes comparable to those of satellites, such defense systems also have inherent ASAT capabilities. In fact, while the technologies being developed for long-range missile defenses might not prove very effective against ballistic missiles—for example, because of the countermeasure problems associated with midcourse missile defense— they could be far more effective against satellites. This capacity is not just theoretical. In 2007, China demonstrated a direct-ascent anti-satellite capability which could be used both in an ASAT and missile defense role, and in 2009, the United States used a ship-based missile defense interceptor to destroy a satellite, as well. US plans indicated a projected inventory of missile defense interceptors with capability to reach all low earth orbiting satellites in the dozens in the 2020s, and in the hundreds by 2030.22 Discrimination The consequences of interfering with a satellite may be vastly different depending on who is affected and how, and whether the satellite represents a legitimate military objective. However, it will not always be clear who the owners and operators of a satellite are, and users of a satellite‘s services may be numerous and not public. Registration of satellites is incomplete23 and current ownership is not necessarily updated in a readily available repository. The identification of a satellite as military or civilian may be deliberately obscured. Or its value as a military asset may change over time; for example, the share of capacity of a commercial satellite used by military customers may wax and wane. A potential adversary‘s satellite may have different or additional missions that are more vital to that adversary than an outsider may perceive. An ASAT attack that creates persistent debris could result in significant collateral damage to a wide range of other actors; unlike terrestrial attacks, these consequences are not limited geographically, and could harm other users unpredictably. In 2015, the Pentagon‘s annual wargame**,** or simulated conflict, involving space assets focused on a future regional conflict. The official report out24warnedthatit was hard to keep the conflict contained geographically when using anti-satellite weapons: As the wargame unfolded, a regional crisis quickly escalated, partly because of the interconnectedness of a multi-domain fight involving a capable adversary. The wargame participants emphasized the challenges in containing horizontal escalation once space control capabilities are employedto achieve limited national objectives. Lack of shared understanding of consequences/proportionalityStates havefairly similar understandings of the implications of military actions on the ground, in the air, and at sea,built over decades of experience. The United States and the Soviet Union/Russia have built some shared understanding of each other‘s strategic thinking on nuclear weapons, though this is less true for other states with nuclear weapons. But in the context of nuclear weapons, there is an arguable understanding about the crisis escalation based on the type of weapon (strategic or tactical) and the target (counterforce—against other nuclear targets, or countervalue—against civilian targets). Because of a lack of experience in hostilities that target space-based capabilities, it is not entirely clear what the proper response to a space activity is and where the escalation thresholds or “red lines” lie. Exacerbating this is the asymmetry in space investments; not all actors will assign the same value to a given target or same escalatory nature to different weapons.

## PTD bad

#### Public trust doctrine enforcement focuses on legal precedent instead of adapting to challenges – that destroys climate change efforts

Humman 15’ Huffman, James L. "Why Liberating the Public Trust Doctrine Is Bad for the Public." Environmental Law (2015): 337-377.5Huffman, James L. "Why Liberating the Public Trust Doctrine Is Bad for the Public." *Environmental Law* (2015): 337-377.

\* James L. Huffman is Dean Emeritus of Lewis & Clark Law School and a Visiting Fellow at the Hoover Institution. He holds degrees from Montana State University (BS), The Fletcher School of Tufts University (MA) and the University of Chicago (JD). Huffman is the author of Private Property and the Constitution (2013), Private Property and State Power (2013) and over 150 articles and chapters on a wide array of topics. He currently serves on the Board of the Morris K. Udall and Stewart L. Udall Foundation. //Monta Vista RD

Perhaps the best indication of widespread commitment to the rule of law is that judges seduced into lawmaking of the kind urged by public trust liberationists, like the liberationists themselves, invariably appeal to precedent in seeking to justify their rulings. This does not mean that the lawmaking judges shy away from explaining the policy benefits of their decisions, but one would be hard pressed to find a case in which a court acknowledges that its new rule has no basis in preexisting law. Rather, lawmaking judges follow the path advocated by Judge Richard Posner in his commentary on the Supreme Court’s decision in Bush v. Gore.227 Posner explains that what he calls pragmatic judges should cover their lawmaking tracks by providing “legal-type judgment” as justification.228 Anyone who believes in the rule of law as a necessary principle of government in every free society should be troubled by this ends-driven, whatever-it-takes approach to judging in particular, and government in general. Even accepting, for the sake of argument, that we face a global environmental crisis as Professor Wood and many others assert, experience demonstrates that compromising the rule of law will harm rather than help efforts to meet any serious challenge. Saving a failing planet will require innovative thinking and creativity of the highest sort. History demonstrates that individual liberty and the rule of law are essential to such innovation and problem solving. Absent the rule of law, many a nation has failed to solve much lesser challenges.230 Like the public trust liberationists, those seeking exemptions from the rule of law always plead a higher good as their justification. Everyone claims to occupy the moral high ground. But constitutional government under the rule of law has long since proven to be the best means for determining where the moral high ground and the public good lie, while leaving ample space and flexibility for their pursuit

## Adv 1

#### Private space corporations are key to increasing safety in space technology.

**Kennedy 18** [Brian, “Many in US have confidence in what private space companies will accomplish”, Pew Research Center. 22 June 2018. https://www.pewresearch.org/fact-tank/2018/06/22/many-in-u-s-have-confidence-in-what-private-space-companies-will-accomplish/] //DebateDrills LC

Most **Americans express confidence that private space companies will make meaningful contributions in** developing **safe and reliable spacecraft or conducting research to expand knowledge of space**, according to [a recent Pew Research Center survey](https://www.pewresearch.org/internet/2018/06/06/majority-of-americans-believe-it-is-essential-that-the-u-s-remain-a-global-leader-in-space/).

**Private companies** such as SpaceX, Blue Origin and Virgin Galactic **are becoming increasingly important players in space exploration.** The National Aeronautics and Space Administration (**NASA) has**[**paid private companies $6.8 billion**](https://www.washingtonpost.com/news/business/wp/2018/06/15/feature/what-does-it-mean-to-be-a-nasa-astronaut-in-the-celebrity-space-age-of-elon-musk-and-richard-branson/?utm_term=.b1045d9e9863)**to develop launch systems that might send astronauts into space** as early as this year. These companies are also [setting their sights](https://www.popsci.com/who-wants-to-go-to-mars) on going to the moon or Mars in the future.

(81%) are confident that private space companies will make a profit from these ventures. Some 44% of **Americans have a great deal of confidence that private space companies will be profitable**, and an additional 36% have a fair amount of confidence.

But Americans are also cautiously optimistic that private companies will make contributions that benefit U.S. exploration efforts. **At least two-thirds of Americans have a great deal or a fair amount of confidence that private space companies will build safe and reliable rockets and spacecraft** (77%), **conduct** basic **research to increase knowledge and understanding** of space (70%) **or control costs for developing rockets and spacecraft** (65%).

#### Space junk in our atmosphere isn’t part of outer space, Merriam webster defines outer space as “space immediately outside the earth’s atmosphere”<https://www.merriam-webster.com/dictionary/outer%20space>

#### 2. The space junk has been put there by PUBLIC entities like governments as well as private entities, even a ban on private entities in space couldn’t solve the problem. As long as anyone is launching anything it is inevitable

**Polyakov 21**, Dr. Max Polyakov, Founder, Noosphere Ventures, Firefly Aerospace, EOS Data Analytics, 5-5-2021, "Where does space junk come from – and how do we clean it up?," World Economic Forum,<https://www.weforum.org/agenda/2021/05/why-we-need-to-clean-up-space-junk-debris-low-earth-orbit-pollution-satellite-rocket-noosphere-firefly/> Livingston RB

Where does space junk come from? **As long as humans launch objects into orbit, space debris is inevitable.** Rocket launches leave boosters, fairings, interstages, and other debris in LEO. So do rocket explosions, which currently account for seven of the top 10 debris-creating events. **Human presence also creates orbital flotsam** – such as cameras, pliers, an astronaut’s glove, a wrench, a spatula, even a tool bag lost during space walks. Some debris is created naturally from the impacts of micrometeoroids – dust-sized fragments of asteroids and comets. With limited lifetimes, **operational satellites can become space debris**. Satellites run out of maneuvering fuel, batteries wear out, solar panels degrade – causing an orbital debris feedback loop, in which the problem is exacerbated when solar panels are sandblasted by micrometeoroids and tiny debris. As with rocket debris, spent satellites eventually re-enter Earth’s atmosphere and burn up, but the process can take years – and the higher they orbit above Earth, the longer those orbits take to decay.

#### **Military space satelties have already been broken up by space debris INCLUDING russia– their escalation scenario is absurd**

Wall 21’ Home News Spaceflight Space collision: Chinese satellite got whacked by hunk of Russian rocket in March By Mike Wall published August 17, 2021 We may see more and more of these orbital smashups in the coming years. //RD Debatedrills

Yunhai 1-02's wounds are not self-inflicted. In March, the U.S. Space Force's 18th Space Control Squadron (18SPCS) reported the breakup of Yunhai 1-02, a Chinese military satellite that launched in September 2019. It was unclear at the time whether the spacecraft had suffered some sort of failure — an explosion in its propulsion system, perhaps — or if it had collided with something in orbit. We now know that the latter explanation is correct, thanks to some sleuthing by astrophysicist and satellite tracker Jonathan McDowell, who's based at the Harvard-Smithsonian Center for Astrophysics in Cambridge, Massachusetts. Sponsored Links Cupertino: Startup Is Changing the Way People Retire SmartAsset Related: The worst space debris events of all time Click here for more Space.com videos... CLOSE On Saturday (Aug. 14), McDowell spotted an update in the Space-Track.org catalog, which the 18SPCS makes available to registered users. The update included "a note for object 48078, 1996-051Q: 'Collided with satellite.' This is a new kind of comment entry — haven't seen such a comment for any other satellites before," McDowell tweeted on Saturday. He dove into the tracking data to learn more. McDowell found that Object 48078 is a small piece of space junk — likely a piece of debris between 4 inches and 20 inches wide (10 to 50 centimeters) — from the Zenit-2 rocket that launched Russia's Tselina-2 spy satellite in September 1996. Eight pieces of debris originating from that rocket have been tracked over the years, he said, but Object 48078 has just a single set of orbital data, which was collected in March of this year. "I conclude that they probably only spotted it in the data after it collided with something, and that's why there's only one set of orbital data. So the collision probably happened shortly after the epoch of the orbit. What did it hit?" McDowell wrote in another Saturday tweet. Yunhai 1-02, which broke up on March 18, was "the obvious candidate," he added — and the data showed that it was indeed the victim. Yunhai 1-02 and Object 48078 passed within 0.6 miles (1 kilometer) of each other — within the margin of error of the tracking system — at 3:41 a.m. EDT (0741 GMT) on March 18, "exactly when 18SPCS reports Yunhai broke up," McDowell wrote in another tweet. Thirty-seven debris objects spawned by the smashup have been detected to date, and there are likely others that remain untracked, he added. Despite the damage, Yunhai 1-02 apparently survived the violent encounter, which occurred at an altitude of 485 miles (780 kilometers). Amateur radio trackers have continued to detect signals from the satellite, McDowell said, though it's unclear if Yunhai 1-02 can still do the job it was built to perform (whatever that may be). Space Junk Clean Up: 7 Wild Ways to Destroy Orbital Debris Click here for more Space.com videos... McDowell described the incident as the first major confirmed orbital collision since February 2009, when the defunct Russian military spacecraft Kosmos-2251 slammed into Iridium 33, an operational communications satellite. That smashup generated a whopping 1,800 pieces of trackable debris by the following October. However, we may be entering an era of increasingly frequent space collisions — especially smashups like the Yunhai incident, in which a relatively small piece of debris wounds but doesn't kill a satellite. Humanity keeps launching more and more spacecraft, after all, at an ever-increasing pace. "Collisions are proportional to the square of the number of things in orbit," McDowell told Space.com. "That is to say, if you have 10 times as many satellites, you're going to get 100 times as many collisions. So, as the traffic density goes up, collisions are going to go from being a minor constituent of the space junk problem to being the major constituent. That's just math." We may reach that point in just a few years, he added. The nightmare scenario that satellite operators and exploration advocates want to avoid is the Kessler syndrome — a cascading series of collisions that could clutter Earth orbit with so much debris that our use of, and travel through, the final frontier is significantly hampered. RELATED STORIES — Who's going to fix the space junk problem? — Space junk removal is not going smoothly — The world needs space junk standards, G7 nations agree Our current space junk problem is not that severe, but the Yunhai event could be a warning sign of sorts. It's possible, McDowell said, that Object 48078 was knocked off the Zenit-2 rocket by a collision, so the March smashup may be part of a cascade. "That's all very worrying and is an additional reason why you want to remove these big objects from orbit,"

#### Transparency inevitable ---Nothing slips by in space answers commercialization

--Surprise attacks either fail bc they’re ragged, or are detected bc the enemy has to load a ton of stuff into space

--Launch capacity is international – would have to ask to do it

--Monitoring satellites is easy – as early as 50s elementary school classes saw stuff – remote sensing means we see everything in space or on the ground

--International nonproliferation agreements democratized site monitoring – we can see states interior regions

--Even if no guarantee, uncertainy means no state would risk it

Handberg, 17 – Faculty and Research, School of Politics, Security, and International Affairs, UCF

Roger Handberg, “Is space war imminent? Exploring the possibility,” Comparative Strategy. 2017. <https://www.tandfonline.com/doi/pdf/10.1080/01495933.2017.1379832?needAccess=true>

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

### AT Space Wars

#### [Better Def] Legal frameworks such as the EU Horizon 2020 will be able to prevent space wars.

**Villarino 19**, José-Miguel Bello Y Villarino, 6-7-2019, "Preventing a Cold War in Space Using European Research and Innovation Programs," Science & Diplomacy,<https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs> Livingston RB

In 2018, the United States President proposed a Space Force [1](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note1) as a sixth branch of the US military.[2](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note2) In 2019, the President of India announced that his country had shot down a low-orbit satellite,[3](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note3) becoming the fourth country to test an anti-satellite (ASAT) technology in a span of twelve years. These events should come as no surprise. **There is a space cold war in the making. Russia, China, and the United States are leading the way, racing to ensure that their space-related asset**s, which play an increasingly essential role in modern warfare, can match, surpass, or counterbalance the capabilities of others. These developments present a greater threat of military confrontation than the 1983 launch of the U.S. Strategic Defense Initiative, better known as “Star Wars”. Since 1983, there had been an unspoken Pax Americana in outer space. An informal global moratorium on the testing of anti-satellite weapons had been initiated by Russia[5](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note5) and generally supported by the international community. There was a global understanding of the benefits of avoiding a weapons escalation in, and towards, space.[6](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note6) Each year, the General Assembly of the United Nations (UNGA) passed nearly unanimous[7](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note7) resolutions on the “Prevention of an Arms Race in Outer Space” (PAROS) (Res. 36/97C). There were even attempts to give these efforts legal force. In 2008, Russia and China submitted a draft Treaty on the Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects (PPWT) to the Conference on Disarmament. Article II is clear about the treaty’s objective: “The States Parties undertake not to place in orbit around the Earth any objects carrying any kinds of weapons, not to install such weapons on celestial bodies and not to place such weapons in outer space in any other manner, [and] not to resort to the threat or use of force against outer space objects”.[8](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note7) These declarations reflected a desire to keep space peaceful, meaning either “not militarised” [9](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note9) or “non aggressive”. Ironically, this proposal was tabled shortly after China’s confirmation in 2007 that it had destroyed one of its own satellites with a guided missile, as a test.[11](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note11) In addition to the resulting space debris problem that was generated, this action forced global powers to rethink the challenges of space security.[12](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note12) The United States quickly followed, demonstrating in 2008 its own anti-satellite system (Aegis Ballistic Missile Defense System) by shooting down its own errant spy satellite as it was falling out of orbit.[13](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note13) [14](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note14) The United States has since acknowledged having an anti-satellite system, the Counter Communications Satellite System, and it has several latent capabilities, notably its ground-based missile defense interceptors.[15](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note15) Russia has also repeatedly tested the PL-19 Nudol ballistic missile,[16](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note16) which can strike objects in orbit.[17](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note17) **There is also clear evidence that other capabilities are being developed to cripple space assets and make space infrastructure useless, including cyberattacks on satellites,**[18](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note18) lasers capable of knocking down space objects,[19](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note19) and methods to jam signals from space. As a result of this dynamic, we have today a militarized space, where a quarter of the active satellites have some military use.[21](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note21%20rel=) Space is today a theatre in war plans. From a legal point of view, this militarization was made possible through a particular interpretation of article IV of the 1967 Outer Space Treaty.[22](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note22%20rel=) This interpretation distinguishes between “peaceful purposes” – applicable to space in general – and “exclusively peaceful purposes” – restricted to certain celestial bodies. Military uses of the moon and other celestial bodies are then outrightly prohibited, but the “empty space” between celestial bodies can be militarized. This line of reasoning could also justify weaponization of that empty space, for example, placing weapons in a satellite. The only legal limit would be the ban on weapons of mass destruction in space established by the same article IV. To prevent it, the UN Assembly General passed in December 2014 UN Resolution 69/32 calling for “[n]o first placement of weapons in outer space”. This attempt to collectively agree on the non-weaponization of space received more limited support than previous PAROS resolutions. Four states voted against it and another forty-two abstained.[23,](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note23%20rel=)[24](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note24%20rel=) It cannot even be excluded that militarization may have already happened. All of this is leading military actors to consider the Earth’s orbit a new “warfighting domain”.[26](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note26%20rel=) The U.S. Air Force’s “Transformation Flight Plan” of 2003 acknowledged that future adversaries could attack space assets, mainly from the ground, and that weapons in orbit may eventually be required to protect those assets.[27](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note27%20rel=) The current U.S. National Security Space Strategy refers to systems to “deny and defeat an adversary’s ability” to successfully carry out “attacks targeted at the U.S. space systems”.[28](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note28%20rel=) The most recent threat assessment of the U.S. intelligence community notes that both Russia and China “aim to have nondestructive and destructive counterspace weapons” to “reduce US and allied military effectiveness” and points to a military trend in China and Russia “designed to integrate attacks against space systems and services with military operations in other domains”. Some believed that the weaponization of space,[30](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note30%20rel=) the establishment of a space force,[31](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note31%20rel=) and other non-peaceful space-related activities were inevitable steps in the decades-long development of space warfare capabilities by the United States, China, and Russia. For these authors, this is not a race “to dominate space” but an incremental development of “a range of options to control or deny outer space in a time of open conflict”.[32](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note32%20rel=) Regardless of the view, space assets will doubtless play a role in future non-peaceful relations between space-faring nations and are already playing a deterrence role. However, a continued and escalating space-based cold war need not occur if more trust can be established among the key players. The European Union as a Broker of Trust. The mistrust that exists among China, Russia, and the United States regarding space-related activities is a logical consequence of the role of space in modern warfare described above. The inability of the participants in these weapons races to adequately assess one another’s capabilities and intentions is driving them to develop even greater capabilities to pre-empt potential adversaries. Yet it is possible to restore a certain degree of trust by allowing space powers to better assess risks, capabilities, and intentions, and break the cycle of escalation. This article contends that cooperation on space-related global challenges can build that trust. Unfortunately, leadership in the domain of space by any one of these three actors is unlikely to be accepted by the others, even if the potential results are beneficial for all. These countries too often present themselves using adversarial language, with media supporting such views.[33](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note33%20rel=) The European Union (EU) is the only global actor that has all of the tools necessary to assist in the establishment of confidence-building measures between China, Russia, and the US in the domain of space. The EU is a key actor in space [34,](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note34%20rel=)[35](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note35%20rel=) despite lacking a space agency as such. Other international organization, the European Space Agency (ESA), provides technical support for the flagship EU programs.[36](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note36%20rel=) The EU has asserted its presence in international space-related policy-making and acted as a diplomatic hinge, for example, in the development of guidelines for an International Code of Conduct for Outer Space from 2008 onwards.[37](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note37%20rel=) Even though other global actors could offer similar or superior combinations of space-related technology, a skilled workforce, and budgetary capacity, only the EU has the appropriate institutional framework – a multi-country, compromise-driven system of governance – combined with a civilian-only research and innovation program.[38](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note38%20rel=) Other non-state entities, such as the ESA or the United Nations, are unable to undertake cooperative efforts to build trust among the three nations because they lack either the budgetary capacity or an adequate institutional framework to push forward a foreign affairs agenda. The EU in particular can offer a civilian, research-driven, diplomatic tool. Such a tool is already within its current legal and policy framework and would build upon previous EU-sponsored actions in space research and innovation. It would not require significant legislative change or a critical rise in expenditure. The main requirement is a clear commitment to its objectives and the political willingness to engage with international actors that may be seen as more inclined to hostile discourse or behavior than is normally promoted by the EU. An EU-driven approach would offer the image of a peace-loving, supranational entity reluctant to or incapable of acting militarily. Its decision-making process already builds in the different sensitivities among its members in relation to the other three actors. Among the EU countries some are closer to China,[39,](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note39%20rel=)some to the United States,[40,](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note40%20rel=)and some to Russia.[41,](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note41%20rel=) While the EU might be expected to cooperate closely with the United States opposite China and Russia, the EU has in the past “recast problems the US interprets as solvable solely with the hammer of military intervention as problems of trade or diplomacy […] forging its own path in service of its ambition to be considered a global player”. [42,](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note42%20rel=) Along with the ability to lead, the EU has every reason to act. Against the backdrop of escalating tensions in space, the EU and its member states appear to be peaceful bystanders. However, as one of the leaders in outer space activities, especially commercial satellite activities, the EU and its members have much to lose from an outright conflict. By bringing the three space powers together, the EU could achieve better security and reliability of space assets, which would benefit its population as well as the whole planet. Additionally, it could project its economic and research power as a powerful diplomatic tool, casting itself as a key international player and global broker in space affairs. The “smart” strategy[43,](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note43%20rel=) envisioned here would combine both hard and soft power under a humble leadership that only the EU seems able to exercise. Europe would not be a resolute leader in the usual sense. Confrontation is beyond its power and not in its DNA. Instead, “[i]n a dangerous world, Europe is the holder of the balance”.[44,](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note44%20rel=) In the context of space, the EU “represents a natural bridge between space competitors and possesses the track record and credibility to serve as the principal ‘middle diplomat’ of the global space community”.[45,](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note45%20rel=) The European Framework for Enhancing Cooperation. **The framework needed to foster cooperation in space between China, Russia, and the United States** (as well as other nations) **is already in place in the EU**. **The** EU’s official **position** regarding the international projection of its research and innovation **is formalized in Horizon 2020** (H2020), the Framework Programme for Research and Innovation (2014-2020).[46](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note46%20rel=) The H2020 Regulation envisions large-scale projects, carried out with international cooperation.[47](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note47%20rel=) It anticipates working with partners in third countries to address many of its objectives, particularly those relating to the Union’s external and development policies and international commitments.[48](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note48%20rel=) **It further establishes that space activities should “support the European research and innovation contribution to long term international space partnerships,” acknowledging that “space undertakings have a fundamentally global character”**.[49](https://www.sciencediplomacy.org/article/2019/preventing-cold-war-in-space-using-european-research-and-innovation-programs#note49%20rel=)

#### No space wars --- dependence on space creates a de facto taboo

Triezenberg, 17

Bonnie Triezenberg, Senior engineer at RAND. Previously, she was the senior technical fellow at the Boeing Company, specializing in agile systems and software development. “Deterring Space War: An Exploratory Analysis Incorporating Prospect Theory into a Game Theoretic Model of Space Warfare,” RAND Corporation. 2017. <https://www.rand.org/pubs/rgs_dissertations/RGSD400.html>

The above discussion suggests that a likely means to achieve deterrence of acts of war in outer space is to increase civilian dependence on space to support day-to-day life—if everyone on earth is equally dependent on space, no one has an incentive to destroy space. Largely by accident, this dependence appears to have, in fact, occurred. The space age was born in an age of affluence and rapid economic expansion; space quickly became a domain of international commerce as well as a domain of national military use. Space assets and the systems they enable have transformed social, infrastructure and information uses perhaps more visibly than they have transformed military uses. In fact, in the current satellite database published by the Union of Concerned Scientists, of the 1461 satellites in orbit 40% support purely commercial ventures, while only 16% have a strictly military use.46 The first commercial broadcast by a satellite in geo-synchronous orbit was of international news between Europe and the United States.47 The first telephony uniting the far flung islands of Indonesia was enabled by satellite48. Those of us who are old enough remember the 1960s “magic” of intercontinental phone calls and international “breaking news” delivered by satellite. Today, most social and infrastructure uses of space are taken for granted – even in remote locales of Africa, people expect to be able to monitor the weather, communicate seamlessly with colleagues and to find their way to new and unfamiliar locations using the GPS in their phones. All of us use space every day.49 These unrestricted economic and social uses of space may be the best deterrent, making everyone on all sides of combat equally dependent on space and heightening the taboo against weaponizing space or threatening space

Internet – still have underwater cables no rzon. Yes – still communicate

No spce weather – predictions can’t solve for global grid damage and we’ve been living blind for the longest of time.