# Constellations (southlake carroll)

## CX

* what is a "large satellite cluster"
  + how close do the group of satellites have to be to be considered a cluster
  + (you want them to concede that it has at least something to do with how close they are to each other b/c then you can make the argument that companies will just find a way around keeping their satellites close together)
* why can't companies split launches into smaller satellite groups, resulting in the same amount of sats
* are there any companies developing these other than starlink?
  + you can PIC out of whatever companies they say

impact card on space heg DA can be traded out with a normal heg card, the internal links to both are equally .... dubious

add some generic debris/space war/warming defense on case

### 1 k (4:45)

#### 40] Security is a psychological construct- the aff’s scenarios for conflict are products of paranoia that project our violent impulses onto the other. Claims of war and conflict create a false dichotomy between the good us and the evil them, ignoring our role in provoking the aggression.

Mack, MD @ Harvard, 91

(John, former Professor of Psychology at Harvard and Pulitzer Prize Winner, <http://johnemackinstitute.org/1988/08/the-enemy-system-short-version/>) BW

The threat of nuclear annihilation has stimulated us to try to understand what it is about mankind that has led to such self-destroying behavior. Central to this inquiry is an exploration of the adversarial relationships between ethnic or national groups. It is out of such enmities that war, including nuclear war should it occur, has always arisen. Enmity between groups of people stems from the interaction of psychological, economic, and cultural elements. These include fear and hostility (which are often closely related), competition over perceived scarce resources,[3] the need for individuals to identify with a large group or cause,[4] a tendency to disclaim and assign elsewhere responsibility for unwelcome impulses and intentions, and a peculiar susceptibility to emotional manipulation by leaders who play upon our more savage inclinations in the name of national security or the national interest. A full understanding of the “enemy system”[3] requires insights from many specialities, including psychology, anthropology, history, political science, and the humanities. In their statement on violence[5] twenty social and behavioral scientists, who met in Seville, Spain, to examine the roots of war, declared that there was no scientific basis for regarding man as an innately aggressive animal, inevitably committed to war. The Seville statement implies that we have real choices. It also points to a hopeful paradox of the nuclear age: threat of nuclear war may have provoked our capacity for fear-driven polarization but at the same time it has inspired unprecedented efforts towards cooperation and settlement of differences without violence. The Real and the Created Enemy Attempts to explore the psychological roots of enmity are frequently met with responses on the following lines: “I can accept psychological explanations of things, but my enemy is real. The Russians [or Germans, Arabs, Israelis, Americans] are armed, threaten us, and intend us harm. Furthermore, there are real differences between us and our national interests, such as competition over oil, land, or other scarce resources, and genuine conflicts of values between our two nations. It is essential that we be strong and maintain a balance or superiority of military and political power, lest the other side take advantage of our weakness”. This argument does not address the distinction between the enemy threat and one’s own contribution to that threat-by distortions of perception, provocative words, and actions. In short, the enemy is real, but we have not learned to understand how we have created that enemy, or how the threatening image we hold of the enemy relates to its actual intentions. “We never see our enemy’s motives and we never labor to assess his will, with anything approaching objectivity”.[6] Individuals may have little to do with the choice of national enemies. Most Americans, for example, know only what has been reported in the mass media about the Soviet Union. We are largely unaware of the forces that operate within our institutions, affecting the thinking of our leaders and ourselves, and which determine how the Soviet Union will be represented to us. Ill-will and a desire for revenge are transmitted from one generation to another, and we are not taught to think critically about how our assigned enemies are selected for us. In the relations between potential adversarial nations there will have been, inevitably, real grievances that are grounds for enmity. But the attitude of one people towards another is usually determined by leaders who manipulate the minds of citizens for domestic political reasons which are generally unknown to the public. As Israeli sociologist Alouph Haveran has said, in times of conflict between nations historical accuracy is the first victim.[8] The Image of the Enemy and How We Sustain It Vietnam veteran William Broyles wrote: “War begins in the mind, with the idea of the enemy.”[9] But to sustain that idea in war and peacetime a nation’s leaders must maintain public support for the massive expenditures that are required. Studies of enmity have revealed susceptibilities, though not necessarily recognized as such by the governing elites that provide raw material upon which the leaders may draw to sustain the image of an enemy.[7,10] Freud[11] in his examination of mass psychology identified the proclivity of individuals to surrender personal responsibility to the leaders of large groups. This surrender takes place in both totalitarian and democratic societies, and without coercion. Leaders can therefore designate outside enemies and take actions against them with little opposition. Much further research is needed to understand the psychological mechanisms that impel individuals to kill or allow killing in their name, often with little questioning of the morality or consequences of such actions. Philosopher and psychologist Sam Keen asks why it is that in virtually every war “The enemy is seen as less than human? He’s faceless. He’s an animal”.” Keen tries to answer his question: “The image of the enemy is not only the soldier’s most powerful weapon; it is society’s most powerful weapon. It enables people en masse to participate in acts of violence they would never consider doing as individuals”.[12] National leaders become skilled in presenting the adversary in dehumanized images. The mass media, taking their cues from the leadership, contribute powerfully to the process. The image of the enemy as less than human may be hard to dislodge. For example, a teacher in the Boston area reported that during a high school class on the Soviet Union a student protested: “You’re trying to get us to see them as people”. Stephen Cohen and other Soviet experts have noted how difficult it is to change the American perception of the Soviet Union, despite the vast amount of new information contradicting old stereotypes.” Bernard Shaw in his preface to Heartbreak House, written at the end of World War I, observed ironically: “Truth telling is not compatible with the defense of the realm”. Nations are usually created out of the violent defeat of the former inhabitants of a piece of land or of outside enemies, and national leaders become adept at keeping their people’s attention focused on the threat of an outside enemy.[14] Leaders also provide what psychiatrist Vamik Volkan called “suitable targets of externalization”[10] – i.e., outside enemies upon whom both leaders and citizens can relieve their burdens of private defeat, personal hurt, and humiliation.[15] All-embracing ideas, such as political ideologies and fixed religious beliefs act as psychological or cultural amplifiers. Such ideologies can embrace whole economic systems, such as socialism or capitalism, or draw on beliefs that imply that a collectivity owes its existence to some higher power in the universe. It was not Stalin as an individual whom Nadezhda Mandelstam blamed for the political murder of her poet husband Osip and millions of other citizens but the “craving for an all-embracing idea which would explain everything in the world and bring about universal harmony at one go”.[16] Every nation, no matter how bloody and cruel its beginnings, sees its origins in a glorious era of heroes who vanquished less worthy foes. One’s own race, people, country, or political system is felt to be superior to the adversary’s, blessed by a less worthy god. The nuclear age has spawned a new kind of myth. This is best exemplified by the United States’ strategic defense initiative. This celestial fantasy offers protection from attack by nuclear warheads, faith here being invested not in a god but in an anti-nuclear technology of lasers, satellites, mirrors, and so on in the heavens.

#### 45] The scripts of escalation and threats from Russia and China to the US shown in Blatt Friedemann are dangerous and ensures securitization and unbalanced measures to continue American space dominance.

Peoples 11

Peoples, Columba (PhD international politics & Critical Security Expert), 2011, “The Securitization of Outer Space: Challenges for Arms Control” Contemporary Security Policy, 32(1), 76–98. doi:10.1080/13523260.2011.5568 // HW AW

It is worth noting that the securitization of outer space – in terms of the identification of space with security – is, in itself, not a novel phenomenon or development. The extent to which **ostensibly civil uses of outer space have been linked implicitly and explicitly to national security** functions historically – or, as in the case of the space race between the United States and Soviet Union, have **acted as a surrogate for direct military engagement** – is well documented.50 Similarly, the characterization of the Sputnik launch in 1957 as placing the United States ‘in the greatest danger in its history’ suggests that the representation of space technologies as potential existential threats is not entirely new either.51 What is of significance, though, is the intensification, expansion and entrenchment of securitizing moves as features of national space policies. The Space Security Index report Space Security 2009, in its overview of national policies, explicitly noted that, on the one hand, ‘National space policies consistently emphasize international cooperation and the peaceful uses of outer space’, but on the other hand that there is a ‘Growing focus within national policies on the security uses of outer space’.52 The report cited as evidence: THE SECURITIZATION OF OUTER SPACE 83 Downloaded by [University of Tennessee, Knoxville] at 06:10 01 January 2015 Japan’s 2008 space law framework, which lifted its previous ban on national security and military space activities; China’s 2006 National Defense White Paper, which identifies national security as principle of China’s emerging space programme; France’s White Paper on Defense and National Security, which calls for an overhaul of its national space strategy; and the renewed priority on ‘space for security’ within EU policy.53 Within recent **United States space policy securitization has been most noticeably prevalent and institutionalized, which is significant given the continued preeminence of the United States as a space power**. As is noted in one recent assessment, around 50 countries, intergovernmental consortia, and nongovernmental organizations have at least one satellite in space, ‘mostly for reasons that have more to do with economic performance and Earth monitoring than with military applications.’54 However, in spite of the increasing diversity of interests in space and the increased range of functions space-based technologies now fulfil, the United States defence budget still remains the single largest source of investment in space technologies. In part this sustained investment arises out of American deployment and development of missile defence systems. Space and missile defences have been intimately connected issues historically and there are obvious technological overlaps between the two. Missile defence systems, including the ground-based system (Ground-Based Midcourse Defence or GMD) currently deployed by the United States at sites in Alaska and California, are dependent on satellite and space-based tracking technologies to detect and track incoming missiles, and there is a possibility that the future connection between missile defence and space will be even stronger if current plans for missile defence are pursued to their fullest extent. Two such systems are already in the early stage of their development: the Space-Based Laser (SBL), which, like the Strategic Defence Initiative or Star Wars proposals of the 1980s, envisages using lasers to shoot down missiles in flight;55 and the ‘NFIRE’ or Near Field Infrared Experiment, a proposal to launch interceptor missiles not from the ground, as in the currently deployed GMD, but from space.56 Even if the developmental status of space-based missile defence interceptors remains uncertain (not least due to the budgetary constraints involved), the currently deployed ground-based system also poses a complex issue in terms of arms control. Though ostensibly intended for defensive purposes, ground and sea-based components of American missile defence could theoretically be employed as an ASAT – Anti-Satellite attack – device, and the use of sea-based Aegis ballistic missile defence capabilities and its Standard Missile 3 (SM3) to shoot down the malfunctioning USA-193 spy satellite in February 2008 has done little to dispel concerns over the offensive applications of current missile defence capabilities.57 In addition, the United States also conducts research into more exotic forms of space weaponry, and funds a variety of technologies aimed at creating a force application capacity from space. The Department of Defense has reportedly explored several highconcept space weapons systems such as Hypervelocity Rod Bundles (tungsten rods dropped on targets from space that would theoretically use gravity as accelerant in a manner akin to a meteor, or Rods from God as they are also colloquially known), the Experimental Spacecraft System (XSS) (a manoeuvrable microsatellite weighing 84 CONTEMPORARY SECURITY POLICY Downloaded by [University of Tennessee, Knoxville] at 06:10 01 January 2015 only 100 kilograms which could prospectively be used to attack other satellites), and the Common Aerospace Vehicle or CAV (this so-called Spaceplane would be unmanned and would orbit the earth, entering the atmosphere when needed to deploy precision guided munitions against selected targets). 58 Such programmes with possible space weapons applications (beyond ground-tospace ASAT capabilities) are still in their relative infancy, and the technical prospects for such technologies, as with the more exotic missile defence proposals outlined above, are far from certain.59 Yet **much of the rhetoric emanating from the United States in recent years has made expansive claims to space dominance far beyond existing capabilities.** In short, rather than seeking to control the means of violence in and from space, much of the military discourse on space has generally cast the United States as a trailblazer in this regard, with exotic systems cited as a necessity for future military dominance in and from space.60 Historically these claims have tended to emanate primarily from the Air Force and Air Force Space Command. In 1998, Space Command defined the control of space (‘space control’) as ‘The ability to assure access to space, freedom of operations within the space medium, and an ability to deny others use of space, if required’61, and space was also considered as part of the remit for ‘full spectrum dominance’ in Joint Vision 2020. 62 Space warriors within and beyond the United States military also make frequent reference to the ‘...importance of dominating space in peace and war’.63 Yet, ‘The **decision to weaponize space does not lie within the military** (seeking short-term military advantage in support of national security) **but at the higher level of national policy** (seeking long-term national security, economic well-being, and worldwide legitimacy of US constitutional values).’64 **Instances of the securitization of outer space within military circles are hardly surprising, given vested interests and the perceived utility of space support for American forces; what is more significant though is the extent to which national policy, though stopping short of explicit advocating of space weapons, has tended to similarly maintain the centrality of space for national security.** 65 As Moore’s ‘biography’ of the idea of unilateral space dominance in the United States attests to, this school of thought has long held a prominent place in American strategic circles.66 Of significance, though, is the extent to which this type of thinking has migrated into official policy, portraying American access to, and dominance of, outer space as key to national survival in the process. The tenure of the George W. Bush administration in particular saw military and policy discourse move much closer in terms of goals and language used, entrenching securitization within United States space policy as a whole. In the terms used above, **the views of space warriors made much greater inroads under the Bush administration, and this has had a significant bearing on how the United States has positioned itself in terms of arms control and how other states – particularly China and Russia – have subsequently defined their own positions**.67 The evolution of official American discourse on outer space over the past decade attests to this subtle shift. In 2001, the Commission to Assess United States National Security Space Management and Organization (or Rumsfeld Space Commission as it is often referred to owing to Donald Rumsfeld’s position as chair) pointed out that a number of states hostile to the United States could attain ASAT capabilities, and, THE SECURITIZATION OF OUTER SPACE 85 Downloaded by [University of Tennessee, Knoxville] at 06:10 01 January 2015 infamously, warned that if the United States did not secure space it would face a Space Pearl Harbor. Members of the Bush administration subsequently went on to effectively endorse the space control concept, asserting the primacy of space for security by openly linking its potential civil and military uses (and thus suggesting only a minimal distinction between the two). Then Deputy Secretary of Defense Paul Wolfowitz argued in a 2002 speech on missile defence that ‘as we look ahead we need to think about areas that would provide higher leverage. Nowhere is that more true than in space. Space offers attractive options not only for missile defense but for a broad range of interrelated civil and military missions. It truly is the ultimate highground.’68 The culmination of this line of thinking in policy terms came with the release of the National Space Policy (NSP) in August 2006, which stated that: The United States considers space capabilities – including the ground and space segments and supporting links – vital to its national interests. Consistent with this policy, the United States will: preserve its rights, capabilities, and freedom of action in space; dissuade or deter others from either those rights or developing capabilities intended to so; take those actions necessary to protect its space capabilities; respond to interference; and deny, if necessary, adversaries the use of space capabilities hostile to US national interests.69 The framing of the arguments from those within the Bush administration thus **clearly aligns with the dynamics of securitization as identified by Buzan et al**. The idea of a Pearl Harbor from Space invokes the nightmare scenario of a surprise attack on American interests in or from space, and was accompanied in the Rumsfeld Commission’s report by the sense of urgency characteristic of securitizing moves: ‘the present extent of US dependence on space [and] the rapid pace at which this dependence is increasing and the vulnerabilities it creates, all demand that US national security space interests be recognized as a top national security priority’.70 The Pearl Harbor analogy implied a focus on a surprise attack itself, but the rest of the report stressed the radical implications of such an attack, suggesting a **potential existential threat** to American commerce, society and, ultimately, way of life. As the report noted, ‘Space enters homes, businesses, schools, hospitals and government offices through its applications for transportation, health, the environment, telecommunications, education, agriculture and energy. Much like highways and airways, water lines and electric grids, services supplied from space are already an important part of the US and global infrastructures.’71 In turn, the NSP of 2006 repeated many of these same securitizing moves. It elevated national security functions of United States space policy, declaring these as vital to national interests, and national security as ‘critically dependent upon space capabilities... this dependence will grow.’ Similarly, the NSP described United States space systems as critical to ‘...a wide range of civil, commercial, and national security users’, identifying the wider security implications of space as well as its more direct military uses.72 **Crucially, this securitization of space was then used to justify exceptional measures with regards to arms control and the previous era of multilateral space agreements**. Among the ‘actions necessary’ to protect space capabilities the NSP declared that: 86 CONTEMPORARY SECURITY POLICY Downloaded by [University of Tennessee, Knoxville] at 06:10 01 January 2015 The United States will oppose the development of new legal regimes or other restrictions that seek to prohibit or limit US access to or use of space. Proposed arms control agreements or restrictions must not impair the rights of the United States to conduct research, development, testing, and operations of other activities in space for US national interests.73 This sentiment had effectively been put into practice even before its formalization in the NSP 2006, with the United States abstaining from votes on the UN General Assembly PAROS (Prevention of an Arms Race in Outer Space) resolution in 2000 and an amended version in 2003, and then voting against it in 2005.74 In this sense the 2006 NSP functioned as a kind of retrospective justification of the exceptional stance adopted – on security grounds – by the Bush administration in relation to space law and arms control. In addition, and moving away from a purely textualist understanding of securitization, the destruction of the USA-193 satellite in 2008 might be seen to constitute an extra-discursive instance of securitization. Although this action was not defined explicitly in terms of a military security rationale (government agencies stressed the rationale for the shoot-down in terms of preventing the malfunctioning satellite from crashing to Earth), it left clear room for interpretation, intended or not, of American willingness to display military space capabilities and further embellished the connection between space and (military) security.75

#### 15] The ASAT threat is constructed through a logic of “capabilities as intentions” that infects US security policy – ensures unbalanced military response – reject “no link” arguments- it’s never explicit

Cameron 18

Hunter Cameron, (PhD public policy), 2018, "The Rise of China in Space Technopolitical Threat Construction in American Public Policy Discourse," https://research-information.bris.ac.uk/ws/portalfiles/portal/183271194/Final\_Copy\_2018\_09\_25\_Hunter\_C\_PhD.pdf, // HW AW

The logic of “capabilities as intentions” was most pronounced in the United States Congress. It was rarely qualified or even made explicit, strong evidence itself that its **validity was truly taken for granted knowledge.** **Claims tended to be unsupported with evidence, and where it was offered, capabilities were often offered up to those listening as prima facie evidence that China was a threat in space, and since these claims usually went unchallenged, it is clear that these explanations were uncontroversial.** The content of the arguments which articulated the meaning of the Chinese space program stayed remarkably consistent both before and after the events of 2003 and 2007, and many of the **Chinese anti-satellite tests** went unnoticed in the Congressional record.34 This may be in part because some discussions took place in closed hearings, but it is still remarkable that the public congressional statements on China’s space program remained so consistent throughout the Bush and Obama administrations, despite the various shifts in the composition of Congress and the leaders of the executive branch. The State Department was also a powerful contributor to the logic of “capabilities as intentions,” specifically in its important regulatory role in defining the legal boundaries of military and non-military space technology. Although far less bombastic than congressional rhetoric, the technopolitics espoused by the International Trade in Arms Regulation (ITAR) provided no grounds for Chinese intentions to be taken into account in American space policy. Once again, this state of affairs was consistent through both the Bush and Obama administrations.

#### 50] Their security frames ensure that the aff’s benign attempt to resist insecurity reproduces the biopolitical imperative that compels liberal regimes to make catastrophic war on difference – the impact is extinction. Evans 16

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Liberal War as Divine Violence Despite universal claims to peaceful co-habitation, liberal regimes have been compelled to make war on whatever threatens it40 . This is why the liberal account of freedom has depended upon a lethal principle, which discursively wrapped in the language of rights, security and justice, inaugurated planetary state of warfare and siege. It has promoted an account of freedom that, in the process of taking hold of the problem of the planetary life of political subjects, linked human potentiality to the possibility of its ruination. If liberal violence has then produced a necessary lethal corollary in its mission to foster the peace and prosperity of the species in order to alleviate unnecessary suffering; so it has also needed to foster a belief in the necessity of violence in the name of that suffering and vulnerability to which it continually stakes a claim. The Liberal wars of the past two decades in particular have revealed a number of defining principles41 . Aside from relying upon technological supremacy and universal claims to truth, they have been overwhelmingly driven by a bio-political imperative, which has displaced concerns with Sovereign integrities with forms of violence carried out in the name of an endangered humanity. In this regard, they have destroyed the Westphalia pretence, seeing the catastrophes of our global age in fact as a condition of possibility to further the liberal will to rule. Since incorporation in this setting has proceed on the basis that all life should necessarily be included within its strategic orbit, the veritable evisceration of any sense of “the outside” (as conceived in terms of its political imaginary) has led to the blurring of all conventional demarcations between friends/enemies, citizens/soldiers, times of war/times of peace. What is more, as life itself became increasingly central to questions of security, issues of development as broadly conceived would no longer be regarded as peripheral to the war effort. It would in fact become a central motif as most notably articulated in the strategic mantras “War by Other means” and “War for Hearts and Minds”. Not only would this point to new forms of de-politicisation which, less about Schmittean exceptionalism, were more explicable in terms of the fundamental political and social transformation of societies. It would also lead to the production of violent subjects, as the recourse to violence became sure testament to a conception of humanity realised through the wars fought in its name. Liberal violence, in other words, proved to be unbounded, unlimited and without conventional Sovereign warrant – namely revealing of the fundamental principles of what Benjamin once elected to term “the divine”. Diagnosing the liberal wars of the past two decades as a form of divine violence offers a more disturbing reading of the violence of the liberal encounter. If the violence of political realism, at least in theory, appreciated the value of limits and boundaries, what seems to define the lethality of liberal freedom has been a commitment to war without boundaries, hence limitless. As Dillon and Julian Reid acutely observed: [L]iberal peacemaking is lethal. Its violence a necessary corollary of the aporetic character of its mission to foster the peace and prosperity of the species ... There is, then, a martial face to liberal peace. The liberal way of rule is contoured by the liberal way of war ... Liberalism is therefore obliged to exercise a strategic calculus of necessary killing, in the course of which calculus ought to be able to say how much killing is enough... [However] it has no better way of saying how much killing is enough, once it starts killing to make life live, than does the geopolitical strategic calculus of necessary killing’42 . This brings us to Steven Pinker’s Better Angels of Our Nature43 . Reworking the well-rehearsed liberal peace thesis, for Pinker, the reason we have become less warlike today can be account for in terms of our liberal maturity. Leaving aside the evident theological undertones to Pinker’s work, along with the numerous empirical flaws in his thesis, his not so original thesis at least accredits its all too Euro-centric sources of inspiration on matters of civility: ‘The reason so many violent institutions succumbed within so short a span of time was that the arguments that slew them belong to a coherent philosophy that emerged during the Age of Reason and the Enlightenment. The ideas of thinkers like Hobbes, Spinoza, Descartes, Locke, David Hume, Mary Astell, Kant, Beccaria, Smith, Mary Wollstonecraft, Madison, Jefferson, Hamilton and John Stuart Mill coalesced into a worldview that we can call Enlightenment humanism’. John Gray has been rightly suspicious of the entire project and claims being made here: The idea that a new world can be constructed through the rational application of force is peculiarly modern, animating ideas of revolutionary war and pedagogic terror that feature in an influential tradition of radical Enlightenment thinking. Downplaying this tradition is extremely important for Pinker. Along with liberal humanists everywhere, he regards the core of the Enlightenment as a commitment to rationality. The fact that prominent Enlightenment figures have favoured violence as an instrument of social transformation is—to put it mildly—inconvenient... No doubt we have become less violent in some ways. But it is easy for liberal humanists to pass over the respects in which civilisation has retreated. Pinker is no exception. Just as he writes off mass killing in developing countries as evidence of backwardness without enquiring whether it might be linked in some way to peace in the developed world, he celebrates “re-civilisation”... without much concern for those who pay the price of the re-civilising process44 . Gray showed his evident concerns here with the promissory nature of liberal violence. Indeed, what he elsewhere terms the violence of the liberal missionary, reposes Nietzsche’s further instance that ‘god is dead and man has killed him’ with a devastating humanistic critique45 . Such violence, in the end, however has proved to be politically, ethically and economically narcissistic. Just as liberal advocates in the zones of crises now increasingly find themselves operating within fortified protectorates as part of a great separation from the world46 , this has been matched, albeit it ways that initially appear disconnected, by new forms of violence which also takes place almost exclusively at a distance. Indeed, as liberal actors increasingly give up on the idea that the world may be transformed for the better, new modalities of violence are emerging which seem to be more logically in fitting with the new politics of catastrophe that increasingly defines our terrifyingly normal times. As the promise of violence and catastrophe now appears inescapable, insecurity is becoming normalised, dystopian realism becoming the prevailing imaginaries for political rule, and once cited claims to emancipation, unending progress and lasting security for peoples all but abandoned47 . The politics of catastrophe and its relationship to “end of times” narratives adds another layer to our theological enquiry. As Jacob Taubes once noted48 , there is perhaps something theologically different at work here between the pre-modern apocalyptic movements and the catastrophic reasoning now defining the contemporary moment. For all their nihilism and monotheistic servitude, at least the apocalyptic movements of yesteryear could imagine a better world than already existed. There is therefore a vast difference between the subjects which names its disaster ‘apocalypse’ to that which reads disaster in terms of ‘catastrophe.’49 Unlike apocalypse, there is no beyond the catastrophic. Its mediation on the “end of times” is already fated. Catastrophe denies political transformation. It demands instead a forced partaking in a world that is deemed to be insecure unto the end. The upshot being, as all things become the source of endangerment, the human becomes the source of our veritable undoing. Angels of History Every war produces its casualties. Some of these stand out in terms of the sheer body count. The horror of mass warfare reduced to the most banal forms of inhuman quantification. Others, no less important, are its political and philosophical losses. What is increasingly clear is that the past two decades of liberal warfare, punctured but not initially determined by the tragedy of the events of September 11th 2001, ultimately put the very concept of war into question. The reluctance to officially declare war, even when our involvement in the politically motivated violence appears to be all too evident, now demands a move beyond the dominant frames which have shaped discussions for the past two decades. There is an important caveat to address here. What happened during last decade of the Global Wars on Terror cannot simply be inserted into a post 9/11 frames for analysis. Much of what passed for post 9/11 justice or military excessiveness was slowly maturing in the global borderlands for some considerable time. If there is a departure it needs to be accounted for against this broader post-Cold War humanitarian sensibility through which liberalism absorbed local crises into its political fabric to further condition its violent interventions. It has been all too easy for political and social theorists to put the blame for the violence and atrocities of the Global Wars on Terror onto the shoulders of George Bush and Dick Cheney. This has allowed liberals to appropriate Schmitt as one of their own, hence reducing the entire war effort to the reductionist measures of “US hegemony/exceptionalism”. Such retreats back into state centric models have not only proved unhelpful in terms of questioning the normalization of violence, they have failed to grasp the complexity of war – especially how questions of universality, economy, power and the formation of political subjectivities can be rethought through violent encounters. What is more, the limits of these analyses have been further evidenced by the complete lack of engagement with political theology, failing to recognize the violence of universal ambitions, along with the need to put the contemporary legacy of Kant on trial. Let us not forget Tony Blair and Barack Obama have embodied the liberal Kantian idea of political leadership better than any others throughout the history of liberalism. Any change in liberal fortunes must be understood in this context. We have witnessed in recent times profound changes in the violent cartography of what is a post-Iraq liberal influence. Instead of actively and one-sidedly engaging the world, humanely, violently or otherwise, what we are now encountering are new political arrangements shaped by forms of distancing and technological realignment. Just as liberal agents in the dangerous borderland areas increasingly find themselves operating within fortified protectorates as part of a great separation from the world, this is matched, albeit it ways that initially appear disconnected, by new forms of violence that also take place at a distance. The political and philosophical significance of this should not be underestimated. The technological and strategic confluence between the remote management of populations (notably surveillance) and new forms of violence are indicative of the narcissism of a liberal project that reeks of the worst excesses of technological determinism. Instead of looking with confidence towards a post-liberal commitment to transforming the living conditions of the world of peoples, what has taken its place is an intellectually barren landscape offering no alternative other than to live out our catastrophically fated existence. This is instructive regarding how we might envisage “the end of liberal times” as marked out and defined by this incommensurable sense of planetary siege. It also demands new thinking about the relationship between violence, technology and theology in these uncertain times. The liberal wars of the past decade have been premised on two notable claims to superiority. The first was premised on the logic of technology where it was assumed that high-tech sophistry could replace the need to suffer casualties. The second was premised upon a more humanitarian ethos, which demanded local knowledge and engagement with dangerous populations. The narcissistic violence of the Global War on Terror has put this secondary vision into lasting crises as the violence of liberal encounter has fatefully exposed any universal commitment to rights and justice. Not only did we appear to be the principle authors of violence, thereby challenging the notion that underdevelopment was the true cause of planetary endangerment, populations within liberal societies have lost faith in worldly responsibilities. Metaphysical hubris displaced by a catastrophic reasoning that quite literally places us at the point of extinction.

#### 30] The alternative is to reject the AFF’s security representations as a critical intellectual labor that makes imagination of a more peaceful future possible. Neocleous 08

(Neocleous 8 — Prof of Government @ Brunel University; London (Mark, Critique of Security, pg. 184-5)

Anyone well versed in history or with experience of university life will know about the shameful ways in which large numbers of academics have elevated venality into the cardinal academic virtue, complying with the demands of those in power and the wishes of those with money: witness the political scientists, historians, anthropologists, geographers, cartographers, sociologists, linguists and many others who reworked their disciplines according to the principles and myths, and the principle myths, of fascism.' 'Academic life under fascism', notes Christopher Hutton, 'is a dismal ... episode in an unedifying story of relations between the modem academic and the state, and between academics and power both within and outside the university. But this part of the history of fascism is merely the worst moment in the wider and equally unedifying story of relations between academics and the state more generally, merely one way m which intellectuals have kowtowed to the principles and myths, and the principle myths, concerning security and the state. Spouting the jargon of security and enthralled by the trappings of power, their intellectual labour consists of nothing less than attempts to write hand-books for the princes of the new security state. The death of countless numbers in a more 'efficient' bombing of a city, the stationing of troops halfway around the World in order to bring to an end any attempt at collective self-determination, the use of military machines against civilians, the training of police forces in counter-insurgency practices, but more than anything the key concepts and categories used to explain and justify these things - all defended, supported and even ‘improved” by security intellectuals for whom, ultimately, intelIecua1 labour boils down to little more than the question of the most efficient manner. In which to achieve the security demanded by the state and bourgeois order. In rationalizing the political and corporate logic of security, the security intellectual conceals the utter irrationality of the system as a whole. The security intellectual then is nothing less than the security ideologue, peddling the fetish of our time. The only way out of such a dilemma, to escape the fetish, is perhaps to eschew the logic of security altogether - to reject it as so ideologically loaded in favour of the state that any real political thought other than the authoritarian and reactionary should be pressed to give it up, That is clearly something that can not be achieved within the limits of bourgeois thought and thus could never even begin to be imagined by the security intellectual. It is also something that the constant iteration of the refrain ‘this is an insecure world’ and reiteration of one fear, anxiety and insecurity after another will also make it hard to do, but it is something that the critique of security suggests we may have to consider if we want a political way out of the impasse of security. This impasse exists because security has now become so all-encompassing that it marginalizes all else, most notably the constructive conflicts, debates and discussions that animate political life. The constant prioritizing of a mythical security as a political end - as the political end - constitutes a rejection of politics in any meaningful sense of the term. That is, as a mode of action in which differences can be articulated, in which the conflicts and struggles that arise from such differences can be fought for and negotiated, in which people might come to believe that another world is possible - that they might transform the world and in turn be transformed. Security politics simply removes this; worse, it removes it while purportedly addressing it. In so doing it suppresses all issues of power and turns political questions into debates about the most efficient way to achieve ‘security’, despite the fact that we are never quite told - never could be told – what might count as having achieved it. Security politics is, in this sense, an anti-politics,” dominating political discourse in much the same manner as the security state tries to dominate human beings, reinforcing security fetishism and the monopolistic character of security on the political imagination. We therefore need to get beyond security politics, not add yet more ‘sectors to it in a way that simply expands the scope of the state, and legitimizes state intervention in yet more and more areas of our lives. Simon Dalby reports a personal communication with Michael Williams, co-editor of the important text Critical Security Studies, in which the latter asks: if you take away security, what do you put in the hole that’s left behind? But I’m inclined to agree with Dalby: maybe there is no hole. The mistake has been to think that there is a hole and that this hole needs to be filled with a new vision or revision of security in which it is re-mapped or civilised or gendered or humanised or expanded or whatever. All of these ultimately remain within the statist political imaginary, and consequently end up re-affirming the state as the terrain of modem politics, the grounds of security. The real task is not to fill the supposed hole with yet another vision of security, but to fight for an alternative political language which takes us beyond the narrow horizon of bourgeois security and which therefore does not constantly throw us into the arms of the state. That’s the point of critical politics: to develop a new political language more adequate to the kind of society we want. Thus while much of what I have said here has been of a negative order, part of the tradition of critical theory is that the negative may be as significant as the positive in setting thought on new paths. For if security really is the supreme concept of bourgeois society and the fundamental thematic of liberalism, then to keep harping on about insecurity and to keep demanding ‘more security’ (while meekly hoping that this increased security doesn’t damage our liberty) is to blind ourselves to the possibility of building real alternatives to the authoritarian tendencies in contemporary politics. To situate ourselves against security politics would allow us to circumvent the debilitating effect achieved through the constant securitizing of social and political issues, debilitating in the sense that ‘security’ helps consolidate the power of the existing forms of social domination and justifies the short-circuiting of even the most democratic forms. It would also allow us to forge another kind of politics centered on a different conception of the good. We need a new way of thinking and talking about social being and politics that moves us beyond security. This would perhaps be emancipatory in the true sense of the word. What this might mean, precisely, must be open to debate. But it certainly requires recognizing that security is an illusion that has forgotten it is an illusion; it requires recognising that security is not the same as solidarity; it requires accepting that insecurity is part of the human condition, and thus giving up the search for the certainty of security and instead learning to tolerate the uncertainties, ambiguities and ‘insecurities’ that come with being human; it requires accepting that securitizing an issue does not mean dealing with it politically, but bracketing it out and handing it to the state; it requires us to be brave enough to return the gift.

**30] Interpretation: The 1AC is an object of research. The role of the neg should be to disprove or challenge the representations and discourse the AC engages in prior to consequential analysis.**

**Plan focus restricts the debate to a ten second statement and leaves the rest of the aff unquestioned. They should be responsible for the way their knowledge is constructed and used because that produces the best model for activism and ethics in the context of the topic which is a unique education net benefit to our interpretation**

**Debate doesn't pass policies but it does alter the way we think about the world and about systems of power – turns their policy research standards because it's a question of how their research is oriented and whether it's for an ethical purpose – only our model of engagement accesses that education**

**Begs the question – if we win their justifications are repugnant that necessarily implicates the conclusion which means defense of their research model is a prior question to weighing the material consequences of the aff – also solves plan focus because the links necessarily implicate aff solvency**

#### 25] Specifically in space discourse – scholarly analysis is a prior task to effectively regulating private enterprise

Peoples 11

Peoples, Columba (PhD international politics & Critical Security Expert), 2011, “The Securitization of Outer Space: Challenges for Arms Control” Contemporary Security Policy, 32(1), 76–98. doi:10.1080/13523260.2011.5568 // HW AW

The context in which outer space is used by international actors is evolving rapidly and in potentially divergent directions. Most prominently, the increased use of space-based technologies to provide critical elements of national and international infrastructure (such as media, communications, and environmental monitoring) has been accompanied by growing dependence on space-based elements of military support such as reconnaissance, military surveillance, and targeting. At the same time, **the variety of actors claiming an interest in access to, and use of, outer space is also proliferating rapidly to include states, regional organizations, and private enterprise**.1 The combination of these developments raises the question of whether outer space is the site of a nascent security dilemma, wherein even ostensibly nonmilitary uses of outer space may generate dynamics of military competition due to the latent dual-use potential of many commercial space technologies.2 In light of the above, many have argued that the existing regulation of the use of outer space (originally developed within the Cold War context and the era of the ’space race’ between the United States and Soviet Union)3 needs to be reviewed, revised and updated, particularly with the emergence of new space powers such as China, India and, as a regional actor, the European Union.**4 Before this can proceed**, however, and given that a shared consensus on a revised international framework on the use of outer space has thus far been elusive, **greater research needs to be undertaken into the terms in which key international actors view outer space and how they perceive and construe their interests in this regard.** With regard to the current state of the field of space security, academic considerations of this subject recurrently tend to break down into a distinction between militarization and weaponization, and discuss the relative merits of each for space powers.5 Space militarization generally denotes the use of space-based technology and infrastructure for the purposes of supporting military operations and functions (including reconnaissance, navigation, and use of satellite targeting systems for terrestrial weapons). Space weaponization is usually taken to refer to the actual placement of weapons in outer space, although the precise definition of the term is often muddied by issues of whether targeting from space itself represents de facto weaponization, and considerations of whether the capacity to attack satellites with land-based ballistic missiles (or other such forms of rudimentary Anti-Satellite Attack Technologies [ASATs]) constitutes a latent form of space weaponization. As a result, academic analysis has tended to become bogged down in the same debates over the finer points of distinguishing between militarization and weaponization that have persistently dogged proposals for new international frameworks on the Contemporary Security Policy, Vol.32, No.1 (April 2011), pp.76–98 ISSN 1352-3260 print/1743-8764 online DOI: 10.1080/13523260.2011.556846 # 2011 Taylor & Francis Downloaded by [University of Tennessee, Knoxville] at 06:10 01 January 2015 use of outer space. **By contrast, this article proposes the introduction of the alternative concept of securitization from the field of critical security studies as a better means of capturing the exact relationship between space and security within the contemporary policy discourses of major space-faring powers, and as a means to open up a broader discussion of Controlling the Means of Violence (CMV) in relation to outer space.** Securitization refers to the discursive processes by which a particular issue comes to be spoken and thought of as a security issue, with particular reference to the ways in which policy makers successfully employ securitizing moves or speech acts. 6 Taking this perspective it is possible to argue that outer space is rapidly becoming securitized in important aspects that are largely missed by current academic accounts, and this has implications both for thinking through more traditional forms of arms control and the more expansive CMV perspective suggested in this special issue. To make this argument, the article maps the current context of space arms control and the contemporary challenges it faces, assessing key definitional issues with regard to debates over space security and arms control in further detail. It then outlines an alternative framework for understanding and conceptualizing space security based on the idea of securitization, illustrating this via an analysis of space securitization in American and European Union space policy discourses. Here it compares the historical understanding of space security in the established discourse of American space policy with the more recently emergent discourse of the EU. This comparative analysis is used to generate critical reflections on the idea of space securitization and its implications for thinking through both arms control (in a more traditional understanding) and the more expansive idea of CMV with regard to outer space. In particular, the concluding section of the article uses the previous analysis to open up a broader debate on whether the securitization of outer space is to be avoided or encouraged from a CMV perspective.

### Case (1:45)

#### Top level each of these advantages are independent links – they’re all hugely inflated threats meant to justify the extension of the biopolitical security state into the private sphere. The US is not going to break the OST and militarize to protect spacex. The ozone layer thinning is not going to cause the human race to go extinct. Their portrayal of these events as extinction threats justifies unbalanced preventative measures like the plan.

#### Collisions –

#### Launches and debris are inevitable – space tourism and state programs

Impey 21 [Chris Impey, professor and deputy head of the department of astronomy at the University of Arizona. His astronomy research focuses on observational cosmology—using telescopes and other instruments to study the large-scale structure and evolution of the universe. He also does research on education and science literacy. "2021: More space launches than any year in history since Sputnik." The Hill, 12-29-2021, accessed 1-22-2022, https://thehill.com/opinion/technology/587630-2021-more-space-launches-than-any-year-in-history-since-sputnik?rl=1] HWIC

The pace of space exploration was frenetic in 2021, with major developments in space policy, and 2022 promises to be just as exciting. Let’s pause and look back on the space milestones of this year:

Moguls in space

It’s an indelible image of science fiction made real. Actor William Shatner, who played Captain Kirk in the original Star Trek TV series, choking up as he described his flight with Blue Origin, after he became the oldest person to reach space at 90 years old. “I hope I never recover from this,” he said.

This year saw three billionaires bolt from the starting blocks in a new commercial space race. First to go up was Sir Richard Branson in July, in the second suborbital flight of his SpaceShipTwo craft. He beat Amazon and Blue Origin founder Jeff Bezos by just nine days, but Bezos can claim bragging rights because his New Shepard craft flew above the Karman line, which is the official demarcation of outer space.

The third billionaire in this elite club is Elon Musk. The Tesla and SpaceX CEO also had a banner year, sending eight astronauts and a ton of supplies to the International Space Station for NASA, and his Inspiration4 mission was the first orbital spaceflight with only private citizens aboard. In a signpost for the future, Musk’s Starship, part of his plan to colonize Mars, stuck its first landing.

A fourth billionaire, Japanese fashion mogul Yusaku Maezawa — who doesn’t have his own rocket company — paid his way to the Space Station on a Russian Soyuz spacecraft.

For one brief moment in December, there were a record 19 people weightless in space, eight of them private citizens. The six tourist spaceflights in 2021 were also a record, and part of a resurgence in activity in space. There were 134 successful orbital missions, with China edging out the United States for the most by any country.

That’s more launches in 2021 than in any year in the history of the space program since Sputnik!

The new Wild West

If all this activity has a downside, it’s the fact that near-Earth orbits are getting crowded, a situation that will only get worse.

People looked anxiously to the sky in May, when a 10-story chunk of China’s biggest rocket plunged to Earth. It landed harmlessly in the Indian Ocean, but there will be many more uncontrolled reentries as China builds its space station. A more ominous event occurred in November, when Russia destroyed one of its own orbiting satellites. This created a vast cloud of fast-moving debris which forced astronauts in the International Space Station to take shelter in their escape spacecraft.

Space junk is a growing problem. There are 23,000 pieces of debris larger than a softball orbiting the Earth. But space junk moves so fast that any of the 100 million pieces larger than a millimeter could damage a spacecraft. In addition to launching 12 people into Earth orbit, SpaceX launched 800 small satellites in 2021. Musk’s eventual goal is 42,000 Starlink satellites to deliver wireless internet to remote parts of the world. These mega-constellations of satellites being launched by SpaceX and other companies will clutter low-Earth orbit. And they’re also bright, shiny objects that will adversely affect ground-based astronomy.

#### Hacking is against govs not companies – huge alt cause

1AC Akoto

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

#### Militarization –

#### No space war – hotlines prevent miscalc

Banerjee 15 — Brinda Banerjee, is a researcher working on security, armed conflict and military policies. She holds a Bachelor’s in Journalism (with Honors), a Master’s in Peace and Conflict Studies and is currently pursuing her Ph.D. in state responses to internal conflict. Brinda writes extensively about current events, conflict resolution and geopolitical dynamics in the modern world, 11-27-2015 ("China, U.S. To Launch Space Hotline To Avoid Space War," ValueWalk, 11-27-2015, Available Online at http://www.valuewalk.com/2015/11/china-u-s-launch-space-hotline-avoid-space-war/, Accessed 6-23-2016, RJS)

That space is the new- perhaps even final- frontier is a widely acknowledged fact. Even as territorial expansionism and resource-driven ambitions continue to dominate international relations, the new-age marker of geopolitical supremacy is space. And China knows this. Which is why Beijing is working hard to establish China’s preeminence in space. However, security experts in China and elsewhere have clearly realized that the risk of in-space collisions and accidents is high and such an incident could easily lead to war back home on earth. Given that the relationship between China and the United States is particularly defined by the desire to outcompete one another, the possibility of a space collision is particularly worrying. And so, Beijing and Washington have decided to set up a “space hotline” to address these concerns. China, U.S. Start ‘Space Hotline’ The space hotline is going to allow direct communication between Beijing and Washington; The Financial Times reports that the hotline will enable the two governments to quickly and efficiently exchange information about each other’s projects and actions in space. The hotline has been conceptualized for the express purpose of avoiding run-ins and unintentional confrontations in space. Using the hotline, officials in China and the United states hope to be able to discuss plans, tests and the likelihood of their paths meeting in space. The hotline will serve as a conduit between military authorities and space program officials. An assistant secretary of state in the United States has shared that the U.S. hopes to cut down on the time it takes to be able to communicate effectively with China on space-related matters. Typically, if Washington wants to convey a message to Beijing, it will start with the Joint Space Operations Center (JspOC) contacting the Pentagon, from where the message is transmitted to the State Department and then onto the U.S. Embassy in Beijing, which will relay it to a Chinese contact and then, once an answer is confirmed, the message is sent back through the chain. The U.S. assistant secretary of state said that in the past Washington has had to “send notifications to the Chinese via their Ministry of Foreign Affairs” and the entire process of contacting the Chinese authorities and receiving a response takes too much time- and in some cases of space-related emergencies and enquiries, neither side has enough time to engage in bureaucratic protocol. In case an impending accident or possible threat is identified, authorities on both ends should be able to quickly reach other and enact a situation-appropriate response strategy without expending too much time on communication and clarification. It is believed that the space hotline will prove helpful in doing just that. The space hotline with China is not the first time the U.S. has chosen to pursue faster communications systems and cooperation with a rival power: in the post-Cold War era, Russia and the United States established a direct line between Moscow and Washington, known as the “red telephone”. Direct links such as these are developed to help traditional competitors avoid catastrophes because the tenuous nature of their ties may trigger off a conflict at any given moment. Authorities Want To Avoid Space Warfare As problematic as space collisions are as of themselves, Beijing and Washington are particularly worried about accidents being interpreted as acts of aggression. A chance encounter may create severe misunderstandings between the two countries and could be incorrectly understood as an act of war, thus inciting actual conflict between the states. The two governments have identified potential risks that may create such a misunderstanding; for instance, experts suggest that unintentionally harming another country’s orbiting satellites would render that country’s intelligence and other systems useless: while this may not, in fact, be a desired outcome it would no doubt be received badly and may force the affected state to enforce counter-measures or retaliate in kind. These concerns are informed by real-life experiences: in 2007, China inadvertently destroyed an orbiting satellite while testing its own anti-satellite weapons systems and the incident sparked off a raging debate on space warfare. The satellite in question was a non-operational weather satellite and while the incident itself did not pose a military threat, it did reveal potential for the same.

**Co-orbital ASATs fail**

**Doboš and Pražák 19** (Bohumil, Institute of Political Studies, Faculty of Social Sciences, Charles University, and Jakub, Institute of Political Studies, Faculty of Social Sciences, Charles University, “To Clear or to Eliminate? Active Debris Removal Systems as Antisatellite Weapons”, Vol. 47, February) DB

The article aimed to assess **the utility of the ADR systems as ASAT weapons**. While looking at the limitations of the currently operational ASAT weapons, we can identify many advantages that the ADR system would hold if used in a harmful manner. **It does not produce additional clouds of orbital debris and is not a military-only technology**. Nevertheless, **ADR systems carry their own set of restrictions if used as an ASAT weapon, namely limited reach and easy destructibility by kinetic ASAT weapons**. This leads us to the consideration that **the technology of the ADR system is probably not practical for the conduct of massive ASAT attacks if developed in a scope proposed by the supporters of active debris mitigation**. As a dual-use technology, its primary function is, nevertheless, determined by the intent of the owner. If the ADR systems are to be effectively utilized in the civil sector, the actor operating them must be perceived as reliable by the vast majority of the international space community. We think that this will be best done by commercialization of the effort in the context of cooperation with state space agencies operating in the sphere—especially civilian ESA—that might help with the technological development. This support should be done under the coordination by the UN as to decrease the negative perception of the operation of such systems.

**Stalkers are peaceful**

Brian G. **Chow**, summer 20**17** (independent policy analyst with over 25 years as a senior physical scientist specializing in space and national security. He holds a PhD in physics from Case Western Reserve University and an MBA with distinction and PhD in finance from the University of Michigan) Stalkers in Space: Defeating the Threat, Strategic Studies Quarterly, https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-11\_Issue-2/Chow.pdf

China’s ASAT developments are comprehensive. In addition to the emerging space stalkers, it continues to develop jammers against communications satellites; powerful lasers to dazzle, blind, or damage space sensors; and cyber capabilities to hack or spoof the control and functioning of satellites. China has also been expanding its space diplomacy. Its space programs have included international cooperation with countries other than Russia. China and the European Space Agency (ESA) are cooperating on a space-weather observatory. ESA personnel have visited Chinese human spaceflight training facilities, with the longterm goal of flying a European astronaut aboard a Shenzhou spacecraft to a Chinese space station.20 These activities help project China as a peaceful and friendly space power. Thus, under the current ambiguity about whether configuring multiple space stalkers or exercising preemptive self-defense is the first act of aggression, the international community might well be on China’s side in a conflict

#### Ozone –

#### This scenario is hilarious – their extinction card is about animal, not human extinction. It just happens to say “us too”, but don’t grant that as a 100% proof of apocalyse cause the ozone layer gets a little bit worse

#### It’s non-unique – starlink already has 5k sats up and we have so many other satellites and they can’t “unlaunch” them, their impact should have triggered already and there’s no brightline

#### There’s a difference between “damage” and “Destroy” – their impact card says the ozone layer has to literally teleport out of existence to cause exitnction, but their link is “sats might be a little bad” – don’t fill in the gaps

#### No ozone impact

**Ridley 14** -- Matthew White Ridley, 5th Viscount Ridley DL FRSL FMedSci, known commonly as Matt Ridley, is a British journalist, businessman and author of popular science books. Since 2013 Ridley has been a Conservative hereditary peer in the House of Lords. “THE OZONE HOLE WAS EXAGGERATED AS A PROBLEM” <http://www.rationaloptimist.com/blog/the-ozone-hole-was-exaggerated-as-a-problem.aspx>

\*\*sry abt formatting it got weird when I pasted it if u need the underlining really bad just ask

Serial hyperbole does the environmental movement no favours My recent [Times column](http://www.thetimes.co.uk/tto/opinion/columnists/article4206440.ece) argued that the alleged healing of the ozone layer is exaggerated, but so was the impact of the ozone hole over Antarctica: The ozone layer is healing. Or so said the news last week. Thanks to a treaty signed in Montreal in 1989 to get rid of refrigerant chemicals called chlorofluorocarbons (CFCs), the planet’s stratospheric sunscreen has at last begun thickening again. Planetary disaster has been averted by politics. For reasons I will explain, this news deserves to be taken with a large pinch of salt. You do not have to dig far to find evidence that the ozone hole was never nearly as dangerous as some people said, that it is not necessarily healing yet and that it might not have been caused mainly by CFCs anyway. The timing of the announcement was plainly political: it came on the 25th anniversary of the treaty, and just before a big United Nations climate conference in New York, the aim of which is to push for a climate treaty modelled on the ozone one. Here’s what was actually announced last week, in the words of a Nasa scientist, Paul Newman: “From 2000 to 2013, ozone levels climbed 4 per cent in the key mid-northern latitudes.” That’s a pretty small change and it is in the wrong place. The ozone thinning that worried everybody in the 1980s was over Antarctica. Over northern latitudes, ozone concentration has been falling by about 4 per cent each March before recovering. Over Antarctica, since 1980, the ozone concentration has fallen by [40 or 50 per cent each September](http://bigstory.ap.org/article/scientists-say-ozone-layer-recovering) before the sun rebuilds it. So what’s happening to the Antarctic ozone hole? Thanks to a diligent blogger named Anthony Watts, I came across a press release also from Nasa about nine months ago, which said: “ Two new studies show that signs of recovery are not yet present, and that temperature and winds are still driving any annual changes in ozone hole size.” As recently as 2006, Nasa announced, quoting Paul Newman again, that the Antarctic ozone hole that year was “the largest ever recorded”. The following year a paper in Nature magazine from Markus Rex, a German scientist, presented new evidence that suggested CFCs may be responsible for less than 40 per cent of ozone destruction anyway. Besides, nobody knows for sure how big the ozone hole was each spring before CFCs were invented. All we know is that it varies from year to year. How much damage did the ozone hole ever threaten to do anyway? It is fascinating to go back and read what the usual hyperventilating eco-exaggerators said about ozone thinning in the 1980s. As a result of the extra ultraviolet light coming through the Antarctic ozone hole, southernmost parts of Patagonia and New Zealand see about 12 per cent more UV light than expected. This means that the weak September sunshine, though it feels much the same, has the power to cause sunburn more like that of latitudes a few hundred miles north. Hardly Armageddon. The New York Times reported “an increase in Twilight Zone-type reports of sheep and rabbits with cataracts” in southern Chile. Not to be outdone, Al Gore wrote that “hunters now report finding blind rabbits; fisherman catch blind salmon”. Zoologists briefly blamed the near extinction of many amphibian species on thin ozone. Melanoma in people was also said to be on the rise as a result. This was nonsense. Frogs were dying out because of a fungal disease spread from Africa — nothing to do with ozone. Rabbits and fish blinded by a little extra sunlight proved to be as mythical as unicorns. An eye disease in Chilean sheep was happening outside the ozone-depleted zone and was caused by an infection called pinkeye — nothing to do with UV light. And melanoma incidence in people actually levelled out during the period when the ozone got thinner. Then remember that the ozone hole appears when the sky is dark all day, and over an uninhabited continent. Even if it persists into the Antarctic spring and spills north briefly, the hole allows 50 times less ultraviolet light through than would hit your skin at the equator at sea level (let alone at a high altitude) in the tropics. So it would be bonkers to worry about UV as you sailed round Cape Horn in spring, say, but not when you stopped at the Galapagos: the skin cancer risk is 50 times higher in the latter place. This kind of eco-exaggeration has been going on for 50 years. In the 1960s Rachel Carson said there was an epidemic of childhood cancer caused by DDT; it was not true — DDT had environmental effects but did not cause human cancers. In the 1970s the Sahara desert was said be advancing a mile a year; it was not true — the region south of the Sahara has grown markedly greener and more thickly vegetated in recent decades. In the 1980s acid rain was said to be devastating European forests; not true — any local declines in woodland were caused by pests or local pollution, not by the sulphates and nitrates in rain, which may have contributed to an actual increase in the overall growth rate of European forests during the decade. In the 1990s sperm counts were said to be plummeting thanks to pollution with man-made “endocrine disruptor” chemicals; not true — there was no fall in sperm counts. In the 2000s the Gulf Stream was said to be failing and hurricanes were said to be getting more numerous and worse, thanks to global warming; neither was true, except in a Hollywood studio. The motive for last week’s announcement was to nudge world leaders towards a treaty on climate change by reminding them of how well the ozone treaty worked. But getting the world to agree to cease production of one rare class of chemical, for which substitutes existed, and which only a few companies mainly in rich countries manufactured, was a very different proposition from setting out to decarbonise the whole economy, when each of us depends on burning carbon (and hydrogen) for almost every product, service, meal, comfort and journey in our lives. The true lesson of the ozone story is that taking precautionary action on the basis of dubious evidence and exaggerated claims might be all right if the action does relatively little economic harm. However, loading the entire world economy with costly energy, and new environmental risks based on exaggerated claims about what might in future happen to the climate makes less sense.