### 1

#### Our interpretation is that you must disclose on the NDCA 2021-2022 HS LD Wiki 30 minutes prior to the round or telling me the aff 30 minutes before the debate – This means providing proper citations for all evidence including first three and last three words and tags as well as all advocacy texts and framework arguments.

#### Violation: They didn’t – SS below

A screenshot of a computer

Description automatically generated

#### Nor did they show up in the NSDA campus 30 minutes before the round to tell me the aff (time is in est)

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Description automatically generated with medium confidence

#### 1) Skews neg prep and clash. Reading a new aff forces the neg to read core generics that don’t negate large portions of the aff and it makes debate harder for the negative

#### 2) Surprises are ableist – two warrants. First is anxiety – reading new arguments leads to panic from debaters as they scramble to find new arguments to read. It justifies panic attacks in and out of round that make debate impossible and deter black and brown participation. The second warrant is short-circuiting thoughts. They’re gonna say on the spot thinking is good, we are turning it right now. Its ableist because not everyone has the same processing speed and disclosing the aff 30 minutes for the round at the very least solves for preparation

#### 3) Hard debate isn’t better debate, its ableist – they assume busting out a new aff is good for competition, but it only serves them. They justify everyone constantly breaking new affs to one-up each other in debates

#### 4) Quality engagement—disclosure allows in-depth preparation before the round which checks back against unpredictable positions - allows for reciprocal engagement

#### 5) Predictability – it’s a norm to disclose on the wiki and respond to disclosure questions; even if they read the same aff, it means Im unsure what to prep pre-round

#### 6) Turns all of their research and ethical education arguments - they don’t care about scholarship they just care about the game.

#### It’s a voter

### 2

#### The affirmative is invested in a will to transparency and global modus venvindi which seeks the maximization of norms and satellization of the planet through the installation of a universal security apparatus. Their cooperation over the peaceful use of space succumbs to an understanding of war as reality that expands the operational function of liquidation beyond the atmosphere. Be skeptical of their attachment to transparency, empirical reality, and necessity of security as the search for mastery normalizes an impulse to conquer alterity and produces the very conditions for its collapse.

Baudrillard 83 (Jean Baudrillard, who is he really. *Simulations* translated by Paul Foss, Paul Patton and Philip Beitchman 1983)DR 19

The "space race" played exactly the same role as the nuclear race. This is why it was so easily able to take over from it in the '60's (Kennedy Khrushchev), or to develop concurrently in a mode of "peaceful coexistence." For what is the ultimate function of the space race, of lunar conquest, of satellite launchings, if not the institution of a model of universal gravitation, of satellisation, whose perfect embryo is the lunar module: a programmed microcosm, where nothing can be left to chance? Trajectory, energy, computation, physiology, psychology, the environment - nothing can be left to contingency, this is the total universe of the norm - the Law no longer exists, it is the operational immanence of every detail which is law. A universe purged of every threat to the senses, in a state of asepsis and weightlessness - it is this very perfection which is fascinating. For the exaltation of the masses was not in response to the lunar landing or the voyage of man in space (this is rather the fulfillment of an earlier dream) - no, **we are dumbfounded by the perfection of their plannin**g and **technical manipulation**, by the immanent wonder of programmed development. Fascinated by the maximisation of norms and by the mastery of probability. Unbalanced by the model, as we are by death, but without fear or impulse. For if the law, with its aura of transgression, if order, with its aura of violence, still taps a perverse imaginary, then the norm fixes, hypnotises, dumbfounds, causing every imaginary to involve. We no longer fantasise about every minutia of a program. Its observance alone unbalances. The vertigo of a flawless world. The same model of planned infallibility, of maximal security and deterrence, now governs the spread of the social. That is the true nuclear fallout: the meticulous operation of technology serves as a model for the meticulous operation of the social. Here, too, **nothing will be left to chance**; moreover, this is the essence of socialisation, which has been going on for some centuries but which has now entered into its accelerated phase, towards a limit people imagined would be explosive (revolution), but which currently results in an inverse, irreversible, implosive process: a generalised deterrence of every chance, of every accident, of every transversality, of every finality, of every contradiction, rupture or complexity **in a sociality illuminated by the norm** and **doomed to the transparency of detail radiated by datacollecting mechanisms**. In fact, the spatial and nuclear models do not even have their own ends: **neither has lunar exploration**, nor **military and strategic superiority**. Their truth lies in their being models of simulation, **vector models of a system of planetary control** (where even the super-powers of this scenario are not free-the whole world is satellised). 8 Reject the evidence: **with satellisation**, the one who is satellised is not whom you might think. By the orbital inscription of a space object, the **planet earth becomes a satellite**, the terrestrial principle of reality becomes excentric, hyperreal and insignificant. By the orbital establishment of **a system of control like peaceful coexistence**, all terrestrial microsystems are satellised and lose their autonomy. All energy, all events are absorbed by this excentric gravitation, **everything condenses and implodes on the micro-model of control** alone **(the orbital satellite),** as conversely, in the other, biological dimension everything converges and implodes on the molecular micromodel of the genetic code. Between the two, caught between the nuclear and the genetic, in the simultaneous assumption of the two fundamental codes of deterrence, every principle of meaning is absorbed, every deployment of the real is impossible. The simultaneity of two events in July 1975 illustrates this in a striking way: **the linkup in space** of the two American and Soviet super-satellites, apotheosis of peaceful existence - and the suppression by the Chinese of character writing and conversion to the Roman alphabet. This latter signifies the "orbital" establishment of an abstract and model system of signs, into whose orbit will be reabsorbed all those once remarkable and singular forms of style and writing. The satellisation of their tongue: this is the way the Chinese enter the system of peaceful coexistence, which is inscribed in their sky at the very same time by the docking of the two satellites. The orbital flight of the Big Two, the neutralisation and homogenisation of everybody else on earth. **Yet, despite this deterrence by the orbital authority** - the nuclear code or molecular-events continue at ground level, mishaps are increasingly more numerous, despite the global process of contiguity and simultaneity of data. **But, subtly,** these events no longer make any sense; they are nothing more than a duplex effect of simulation at the summit. The best example must be the Vietnam war, since it was at the crossroads of a maximal historical or "revolutionary" stake and the installation of this deterrent authority. **What sense did that war make**, if not that its unfolding sealed the end of history in the culminating and decisive event of our age? **Why did such a difficult, long and arduous war vanish overnight as if by magic?** Why didn't the American defeat (the greatest reversal in its history) have any internal repercussions? If it had truly signified a setback in the planetary strategy of the USA, it should have necessarily disturbed the internal balance of the American political system. But no such thing happened. Hence **something else took place**. Ultimately this war was only a crucial episode in a peaceful coexistence. It marked the advent of China to peaceful coexistence. **The long sought-after securing and concretising of China's non-intervention**, China's apprenticeship in a global modus vivendi, the passing from a strategy of world revolution to one of a sharing of forces and empires, the transition from a radical alternative to political alternation in a now almost settled system (normalisation of PekingWashington relations): all this was the stake of the Vietnam war, and in that sense, the USA pulled out of Vietnam but they won the war. And the war "spontaneously" came to an end when the objective had been attained. This is why it was de-escalated, demobilised so easily. The effects of this same remolding are legible in the field. The war lasted as long as there remained unliquidated elements irreducible to a healthy politics and a discipline of power, even a communist one. When finally the war passed from the resistance to the hands of regular Northern troops, it could stop: it had attained its objective. Thus the stake was a political relay. When the Vietnamese proved they were no longer bearers of an unpredictable subversion, it could be handed over to them. That this was communist order wasn't fundamentally serious: it had proved itself, it could be trusted. They are even more effective than capitalists in liquidating "primitive" precapitalist and antiquated structures. Same scenario as in the Algerian war. The other aspect of this war and of all wars since: behind the armed violence, the murderous antagonism between adversaries - which seems a matter of life and death, and which is played as such (otherwise you could never send out people to get smashed up in this kind of trouble), behind this simulacrum of a struggle to death and of ruthless global stakes, the two adversaries are fundamentally as one against that other, unnamed, never mentioned thing, whose objective outcome in war, with equal complicity between the two adversaries, is total liquidation. It is tribal, communal, pre-capitalist structures, every form of exchange, language and symbolic organisation which must be abolished. Their murder is the object of war - and in its immense spectacular contrivance of death, war is only the medium of this process of terrorist rationalisation by the social - the murder through which sociality can be founded, **no matter what allegiance**, communist or capitalist. The total complicity or division of labour between two adversaries (who can even make huge sacrifices to reach that) for the very purpose of remolding and domesticating social relations. "The North Vietnamese were advised to countenance a scenario of the liquidation of the American presence through which, of course, honour must be preserved." The scenario: the extremely heavy bombardment of Hanoi. The intolerable nature of this bombing should not conceal the fact that it was only a simulacrum to allow the Vietnamese to seem to countenance a compromise and Nixon to make the Americans swallow the retreat of their forces. The game was already won, nothing was objectively at stake but the credibility of the final montage. **Moralists about war**, champions of war's exalted values should not be greatly upset: a war is not any the less heinous for being a mere simulacrum - the flesh suffers just the same, and the dead ex-combatants count as much there as in other wars. That objective is always amply accomplished, like that of the partitioning of territories and of disciplinary sociality. What no longer exists is the adversity of adversaries, **the reality of** antagonistic causes, the ideological seriousness of war - also the reality of defeat or victory, war being a process whose triumph lies quite beyond these appearances. In any case, the pacification (or deterrence) dominating us today is beyond war and peace, **the simultaneous equivalence of peace and war.** "War is peace," said Orwell. Here, also, the two differential poles implode into each other, or recycle one another - a simultaneity of contradictions that is both the parody and the end of all dialectic. Thus it is possible to miss the truth of a war: namely, that it was well over before reaching a conclusion, that at its very core, war was brought to an end, and that perhaps it never ever began. Many other such events (the oil crisis, etc,) never began, never existed, except that artificial mishaps - abstracts, ersatzes of troubles, catastrophes and crises intended to maintain a historical and psychological investment under hypnosis. All media and the official news service only exist to maintain the illusion of actuality - of the reality of the stakes, of the objectivity of the facts. All events are to be read in reverse, where one perceives (as with the communists "in power" in Italy, the posthumous, "nostalgic" rediscovery of gulags and Soviet dissidents like the almost contemporary rediscovery, by a moribund ethnology, of the lost "difference" of Savages) that all these things arrive too late, with an overdue history, a lagging spiral, that they have exhausted their meaning long in advance and only survive on an artificial effervescence of signs, that all these events follow on illogically from one another, with a total equanimity towards the greatest inconsistencies, with a profound indifference to their consequences (but this is because there are none any more: they burn out in their spectacular promotion) - thus the whole newsreel of "the present" gives the sinister impression of kitsch, retro and porno all at the same timedoubtless everyone knows this, and nobody really accepts it. The reality of simulation is unendurable - more cruel than Artaud's Theatre of Cruelty, which was still an attempt at a dramaturgy of life, the last flickering of an ideal of the body, blood and violence in a system already sweeping towards a reabsorption of all the stakes without a trace of blood. For us the trick has been played. All dramaturgy, and even all real writing of cruelty has disappeared. Simulation is master, and nostalgia, the phantasmal parodic rehabilitation of all lost referentials, alone remain. Everything still unfolds before us, in the cold light of deterrence (including Artaud, who is entitled like all the rest to his revival, to a second existence as the referential of cruelty).

#### Their faith in satellites locks in global crises – suturing space to warfare locks out alternative futures in favor of fantasies of existential threat that make their impacts inevitable.

Masco, 12 (Joseph, Prof. of Anthropology @ U. of Chicago, “The End of Ends” *Anthropological Quarterly*, Vol. 85, No. 4 (Fall 2012), pp. 1107-1124)

In an extreme age, we might well ask: what are the possibilities for a productive shock, an experience or insight that would allow us to rethink the terms of everyday life? In the discipline of biology, the recent discov- ery of microbial extremophiles in deep-sea volcanic vents has fundamen- tally challenged longstanding scientific definitions of life (Helmreich 2008). Living under conditions of extreme heat and pressure, these methane- eating beings have redefined the very limits of life on planet Earth and beyond. What could produce a similar effect in the domain of security? Opportunities for such a critique are ever present, an endless stream of moments in fact, yet constantly **subsumed by the normalizing effects** of a national security culture committed to a **constant state of emergency**. A return to basic questions of how to define profit, loss, and sustainability is a key concern today in the US and this paper asks what kind of analy- sis could begin to redefine the limits of a collective security? What kind of **de-familiarization** and/or **productive shock** might allow insight into the cultural terms of expert judgment today in the US, allowing us to **rethink** the logics and practices that have simultaneously produced a **global war on terror**, a global **financial meltdown**, **and a planetary climate crisis**? How can Americans- extremophiles of the national sort- assess their own his- tory within a national-cultural formation devoted to the **normalization of violence (as war, as boom and bust capitalism, as environmental ruin**) as the basis for everyday life? This short paper does not provide an answer to these questions (would that it could!), but rather seeks to offer a provocation and a meditation on paths constantly not taken in US national security culture. It asks: how can we read against the normalizing processes of the security state to assess **alternative futures,** alternative visions **rendered** **invisible** by the complex **logistics of military science, economic rationality**, and **global governance**? To do so is to break from the normalizing force of everyday national secu- rity/capitalism, and interrogate the assumed structures of security and risk that support a global American military deployment and permanent war posture. To accomplish this kind of critical maneuver, however, one needs to be able to recognize the **alternative futures rendered void** by the **specific configurations of politics and threat** empowering **military industrial action** at a given moment. An extreme critique requires the ability to assess the alternative costs and benefits that remain suspended within the spaces of an **everyday American life constantly rehearsing (via media, political culture, and military action) terror as normality**. What follows then is both an examination and a performance of extremity- pushing a critical history and theory well beyond the usual scholarly comfort level. It seeks less to settle and explain than to agitate and provoke. To engage an extreme point of view on crisis, both exterior and ob- jective, let's turn to a spectacular new technology that seemed to offer just such a perspective on US security culture in 1960- that of an exterior gaze on planet Earth. **The first satellite imagery** was not only a techno- logical revolution of profound importance to the military (and ultimately the earth and information sciences), it also **constituted a rare moment of ob- jective critique to American Cold War fantasies** at their most virulent and violent. Covert and extremely fragile, the first Corona satellite was secretly launched into outer space in August of 1 960, offering a new optics on Cold War military technologies and fantasies. Imagine, if you will, a rocket car- rying not a warhead but a giant panoramic camera (see Figures 1 and 2), slung into a low orbit over Europe, running a long reel of 70mm film, spe- cially designed by Kodak to function in outer space. The satellite makes a series of orbits exposing its film over designated areas, and then ejects a fire-proof capsule carrying the film, sending it back into Earth's atmosphere (see Figure 3). As the capsule descends via a series of parachutes, it emits a homing signal, allowing a specially equipped plane to detect the signal and swoop in, capturing the now charred film canister in mid-air via a gi- ant hook (see Figure 4). On August 18, 1960 the **Corona Project** became the first space based reconnaissance system, providing the CIA with the first satellite photographs of Soviet military installations (see Figures 5 and 6; as well as Day, Logsdon, and Latell 1998; and Peebles 1997). Corona provided the most accurate images of Soviet military capabilities to date, offering concrete photographic evidence of Soviet missile capabilities at a time of near hysterical speculation about imminent Soviet attack. Soon US **officials knew via photo- graphic documentation** of commu- nist military bases that **the Soviets did not have a vast and growing ICBM superiority** capable of over- whelming US defenses. In fact, the US had something on the order of a ten to one advantage in missiles, and even more in nuclear devices. At this moment in the Cold War, **outer space provided the only clear view of nuclear threat- providing a series of photographs that dramatically changed how US officials viewed the immediacy of nuclear war** (Richelson 2006). Over the next decade, **the race to the moon became the public face of a covert enterprise to extend and expand space surveillance**. Plans for manned photographic studios in space with Hubble telescope- sized lenses pointed toward Earth, soon were enhanced by digital communications that allowed in- stant data transmission (see Willis and Bamford 2007). The Corona cameras evolved quickly, moving from the 40-foot resolution offered in 1960 to five-foot resolution by 1967, a revolution in optics that was soon followed by digital satellite systems capable of three-inch resolution, in- frared imaging, and the near instantaneous transfer of information. These remote sensing technologies have since revolutionized everything from geography, to climate sciences, to the now ubiquitous GPS systems and Google Earth. The Central Intelligence Agency (CIA) has long considered the Corona satellite one of its most im- portant achievements, a pure suc- cess story. As Director of the CIA, Richard Helms held a ceremony in honor of the Corona Program's re- tirement in 1 972 (in favor of the next generation digital satellite system). He presented a documentary film, entitled "A Point in Time" to CIA personnel detailing the crucial his- tory of the top-secret program, its technological achievements, and its central role in Cold War geopolitics. litics. A Corona capsule and an exten- sive photographic display of Corona satellite imagery was then centrally installed at CIA Headquarters in Langley to document its success for all future employees. On display there through the end of the Cold War, com- ponents of this exhibit can now be seen at the Smithsonian Air and Space Museum. The extensive Corona photographic archive became available Corona as a fantastically successful covert spy system and others today value its photographic record for non-military scientific research, a basic lesson of the Corona achievement remains unrecognized: the first satellite system not only offered a new optic on Soviet technology, **it also revealed how fantastical American assessments of Soviet capabilities wer**e in the 1 950s. It offered a new remote viewing photography but also new insight into the American national security imaginary. The first Corona images have as much to say about the **ferocious US commitment to** nuclear weapons and **a global nuclear war machine** already set on a minute-to-minute trig- ger by 1960, as about Soviet weapons. The first Corona images contra- dicted expert US judgments of Soviet capabilities and desires, providing a powerful counterweight against arguments for a preemptive US attack on the Soviet Union. The slightly blurry satellite photographs thus held **the potential for a radical critique of American perceptions** of the Soviet Union, **showing that US officials were as much at war with their own apocalyptic projections** in 1 960 as with Soviet plans for territorial expansion. **An anthropology of extremes requires a non-normative reading of cul- ture and history, an effort to push past consensus logics to interrogate what alternative visions, projects, and futures are left unexplored at a given historical moment.** The rapidly evolving historical archive provides one op- portunity for this kind of critique: our understanding of the 20th century American security state is changing with each newly declassified program and document, dramatically reshaping what we know about US policy, mil- itary science, and threat assessments since World War II. The Corona pho- tographs are a compelling illustration of the power of the evolving national security archive. As the enormous military state apparatus that constitutes the core of the American political and economic machine is grudgingly opened to new kinds of conceptual interrogation, Americans should seize the opportunity to learn about their own commitments, political processes, and security imaginaries. Indeed, **the national security archive** is one place where we can formally consider how the 20th century "balance of terror" has been remade in the 21st century as a "war on terror"- following the **affective politics**, **technological fetishisms**, **and geopolitical** **ambitions** that have come to **structure US security culture**. The declassified Cold War ar- chive allows us to pursue an extreme reading of US security culture, one committed to pushing past official policy logics at moments of heightened emergency to consider how **threat**, historical contingency, **technological revolution**, **propaganda**, and geopolitical ambition **combine in a specific moment of extreme risk**. The first Corona images, for example, constitute a moment when administrators of the national security state had **their own logics** and fears **negated** in the form of direct photographic evidence, opening a **potential conceptual space for radical reassessment of their own** ambitions, perceptions, and **drives**, powerfully revealed in black and white photos **as fantasy**. We might well ask why **the Corona imagery** (**and** any number of **similar moments when existential threat** **has** objectively **dissolved into mere projection- most** recently, the missing weapons of mass destruction used to justify the US invasion of Iraq in 2003)- **did not pro- duce a radical self-critique in the US**. The Cold War nuclear standoff installed **existential threat as a core structure of everyday American life**, making nuclear fear the coordinat- ing principle of US geo-policy and a **new psychosocial reality** for citizens increasingly connected via images of their own imminent death. Indeed, few societies have prepared so meticulously for collective death as did Cold War America while simultaneously denying the possibility of an ac- tual ending. From large scale civil defense drills in which the destruction of the nation-state became a kind of public theater, to the articulation of a Cold War militarism that understood all global political events as condi- tioning everyday American life, the height of the Cold War worked in novel ways both to enable and deny the possibility of a collective death (Masco 2008). **The early history of the Corona Satellite System offers a compel- ling story about the technological achievement of a total ending, and the Cold War hysteria of the years 1957-1962 in the US**. This is a moment of maximal danger but also of new perspectives- crucially those derived from outer space- that momentarily opened up multiple contingent and radically different security futures. For an anthropology of extremes, this period of Cold War can be approached as an ur-moment; foundational in terms of the technology, theory, politics, and ambitions supporting the American security state. Interrogating this first period of global nuclear danger via recently declassified materials allows us to ask: how does one end the possibility of a total ending? How does a society pursuing war as a normalized condition of everyday life pause and reflect on its own intel- lectual and psychosocial processes? Within modern political theory the means to an end has been embed- ded within the very concept of rationality, making ends and means syn- onymous with progress, a perpetual engine of improving the infrastruc- tures of everyday life as well as the morality of those living within it. Within this modernity- glossed here as the application of reason to nature as progress- we have few efforts to theorize the reality or implication of con- ceptual blockages or blindnesses within the very notion of security. The assumption that instrumental reason is not only a means to an end but an essential good structures a Euro-American modernity in which supersti- tion is set against the possibility of an unending technological progress (Horkheimer and Adorno 2002:1). Benjamin (1969) offers perhaps the most powerful critique of "progress" by showing how **the promise of the "new" can be the vehicle of social mystification and entrenchment**. His call to "brush history against the grain" and establish a critical method that can "seize hold of a memory as it flashes up at a moment of danger" is ultimately a call to resist the normalization (and naturalization) of violence in everyday life. But how, and under what terms, can this be accomplished in a national security state that is premised on the total ending of nuclear war? Having built the war machine as a global system, how can a society turn towards an alternative notion of security, one not grounded in the technological possibility of total nuclear war? How, indeed, does **thinking about an absolute ending** work to **install a new set of fantasies and short circuits that prevent reflexive critique**? How do rational modes of planning work not to eliminate the possibility of collective death but rather, through self-mystification, to install its pos- sibility ever deeper into an expert state system? Kant (1986) articulated one central area where reason is installed as a compensation for a lack of understanding in his notion of the sublime. Sublime experience, in his view, overwhelms the human sensorium providing that strange mix of pleasure and terror involved in surpassing one's cognitive limit. For Kant, the experi- ence of incomprehensibility is then managed by an act of categorizing- by a naming of the event- rather than through understanding. Compensation rather than comprehension is thus achieved, installing at the very center of his notion of reason an irreducible problem about means, ends, and the ability of human beings in extreme moments to comprehend both. "**Terror**" has an inherent sublimity, one that has been multiplied across contempo- rary crisis- war, economy, environment- to create a new complex con- figuration of planetary risk that exceeds the power of the national security state (Masco 201 0). **Nuclear terror**, as a permanent state system, however, is not a momentary experience (as Kant's sublime requires) but **is** instead **a global infrastructure**- one **that coordinates American military power as well as its domestic politics**. **This infrastructure requires constant affective as well as technological support, merging complex social and technologi- cal processes that become fused in perceptions of global risk**. Put differently, instrumental reason has orchestrated our globalized, economized, technologized modernity but it has also installed a set of compensations for those events, desires, and biological facts that dis- rupt specific calculations of progress/profit. By the mid-20th century, the products of instrumental reason- the very means to an end- produced new forms of war that ultimately challenged the survival of the species. The atomic bomb stands as both a rational technology- produced via the combined work of physicists, engineers, chemists, industrialists, military planners, defense intellectuals, and civilian policy makers- and as a limit case to that instrumental reason (see Edwards 1996, Oakes 1994). In the early days of the nuclear age, some Manhattan Project scientists hoped this new technology would be so terrible that it would simply end the pos- sibility of war (e.g., Federation of American Scientists 1946). Instead, US war planners built a global system for nuclear war that could end life itself within a few minutes of actual conflict. Each new nuclear system- bomb- er, submarine, and missile- was both a technological achievement of the first order and an accelerating progression towards the end of modernity in the form of nuclear war. What these technical experts were attempting to negotiate through engineering is a basic relationship to death, a perverse project of build- ing ever more destructive machines in the name of producing "security." Indeed, **displacing** the threat of **one machine** (the bomb) with another (the bomb) became the basis for **deterrence theory, a way of organizing and containing the thought of death by expanding technological systems**. Freud (1991) saw this contradiction in militarism early on, and in his remarkable 1915 essay "Thoughts for the Times on War and Death" he is definitive that it is impossible to comprehend- to actually believe in- one's own death. Thus, he notes, even as the human organism moves closer to death with each tick of the clock, the ego pursues a program of immortality and works **to relocate the** onrushing **reality of death to exterior locations**- to novels, to foreign populations, to distant wars, **to a radical outside**. Thus, **the thought of an "ending" here literally pro- duces a new set of means- fantasies, projections, displacements, and amnesias all mobilized to suture together an idea of an eternal** **self**. In American national-culture, the Cold War performed this task through a series of circuits: the communist threat was simultaneously everywhere and nowhere, and the immanent threat of nuclear war was mitigated by a fetishistic focus on technological detail. Cold War planners managed the threat of nuclear war through constant proliferation- of weapons, deliv- ery systems, images, theories, and calculations. Through this prolifera- tion, Cold War planners pursued a program of intellectual compensation for the confrontation with a new kind of death. They did so by mobilizing all national resources (changing the very temporal horizon of war from days, to hours, to minutes in the process), as well as by pursuing proxy wars and covert actions around the world. In the process, Americans learned how to be committed to total war as a precondition for everyday life while locating death as exterior to the nation, even as the war machine grew ferociously in its technological capacities. This represents a distinc- tive national-cultural achievement: a notion of **security** that **brings collective death ever closer in an attempt to fix its location with ever more precision**. By the time of the first Corona photograph, the US nuclear system was on constant and permanent alert, managing a global war machine on a minute-by-minute temporal scale- one that imagined a Soviet nuclear strike coming with less than seven minutes warning (Keeney 201 1 :1 86). US military systems became both the most direct application of tech- nical rationality and the location of deep fantasies about national immor- tality and systems of total control. In the first decade of the Cold War, for example, the lack of detailed intelligence about the Soviet Union enabled an American national security project that was both technologically Uto- pian and driven by increasingly apocalyptic visions of an omnipotent other. A top-secret, blue-ribbon panel studying the possibility of nuclear civil defense in 1957, known as the Gaither Committee, not only recom- mended a nationwide commitment to building underground bunkers and training citizens to think calmly about experiencing nuclear war, its mem- bers also concluded that a "missile gap" with the Soviet Union left the US increasingly vulnerable to a devastating "first strike" (Security Resources Panel of the Science Advisory Committee 1 957). Reinforced by the hys- teria over Sputnik later in 1957- the first artificial satellite in space- US national security debates, by the end of the 1950s, were structured by visions of a Soviet sneak attack that would destroy urban America in an instant. The Gaither Committee leaked to the press their conclusion that by 1959 the Soviets would have a decisive advantage in ICBMs (see Roman 1995, Snead 1999) provoking huge nuclear arms expenditures in the US. The domestic politics informing the "missile gap" narrative were part of the battle between military branches for nuclear resources and soon key to John F. Kennedy's presidential campaign strategy of positioning his Republican rivals (Eisenhower and then Nixon) as weak on national security. Thus**, a threat projection with multiple political uses became codified as a kind of truth in US national security policy**, leading to massive increases in defense spending at the end of the Eisenhower administration and then again at the start of the Kennedy administration. The nuclear triad- of bombers, ICBMs, and submarines- is built at this moment, providing multiple redundant systems for waging nuclear war and giving each branch of the military a nuclear capability. Today we can see that in addition to the new weapons systems built at the end of the 1950s, there was also an important political discovery crucial to the evolving Cold War: namely, the universal utility of threat pro- liferation in US security culture. **The raw political value of existential threat as a motivating narrative became a well-worn domestic strategy** in the US, one linking the "missile gap" of the 1950s to the "window of vulner- ability" of the 1 970s, to the "strategic defense initiative" of the 1 980s to the "**space based Pearl Harbor**" narratives of the 1 990s **to the terrorist "WMD" discourses** of the 2000s as illustrations of a nuclear culture. In each of these cases, we can see how the bomb (as **a consolidated form of existential threat**) **has** been good for Americans to think with, **becom**ing the basis for building a nuclear state and a **global military system** but also for trans- forming raw military ambition into a necessary form of "defense." But if the bomb has been crucial to constituting US "superpower" status, it has also **produced a complex new domestic affective political domain, allowing images of**, **and** **appeals to,** **existential threat to become a central means of** establishing and **expanding a militarized national security culture**.

**International cooperation over debris is an ideological smokescreen for neoconservative practices and capital fixes – debris risk is incalculable and their collision cascade arguments are a fantasy, but their modelling practice secures a social fantasy of threat that enables imperial transcendence.**

**Ormord, 12** (James, School of Applied Social Science, University of Brighton, “Beyond world risk society? A critique of Ulrich Beck’s world risk society thesis as a framework for understanding risk associated with human activity in outer space.” Environment and Planning D: Society and Space 2013, volume 31, pages 727 – 744)

Prior to the Iridium–Cosmos collision experts placed the odds of two objects larger than ten centimetres in diameter colliding in space at “millions, maybe even billions, to one” (Rincon, 2009). The chances of damage being sustained by operational objects as they collide with smaller objects are much higher, at 1–10%; this may be their single greatest threat (Rex, 1998; Williamson, 2006; Wright, 2009, page 6). A United Nations report in 1999 brought together a range of measurements and statistical models from different agencies in an attempt to draw up a risk assessment. These models “did not agree quantitatively because of differences in assumptions and starting conditions” (UN, 1999, page 25). But despite this, it concluded that collision risk in Low Earth Orbit (less than 2000 kilometres) was “not great”, and the collision risk in Geostationary Orbit was “correspondingly lower”. However, all were also agreed that the number of major collisions would rise exponentially if current trends continued. This is based on the understanding that because it takes a long time to disperse, debris created from one impact will go on to create more impacts in a ‘collision cascade’, referred to as the ‘Kessler Syndrome’ (Brearley, 2005; Williamson, 2006; Wright, 2009). In a 2006 report NASA referred to this situation as “supercritical” (Wright, 2009). Modelling this effect adds to the complexity of a risk assessment already understood to be limited by knowledge of current amounts of debris and of how spacecraft respond to impacts that “do not fall into categories normally known from solid-state physics” (Rex, 1998, page 100; UN, 1999). To these difficulties in modelling the physical risks to spacecraft should be added the impossibility of establishing the social and economic consequences of a collision cascade in Geostationary Orbit, which one author describes as a (limited) resource “necessary to human life” as “the space ... which allows contemporary communication practices to exist” (2) Geostationary Orbit exists at an altitude of 35 786 kilometres at which satellites appear stationary from Earth. See Collis (2009) for a useful discussion of its legal geography. (Collis, 2009, pages 55 and 49). Expert opinion has suggested a collision cascade “could take out world communications” (Ellis, 2009). Outer space was once considered inexhaustible. It is now being realised that the development of outer space has been unevenly concentrated in key regions (see MacDonald, 2007), with implications for thinking of outer space as a ‘common pool resource’. Debris might impede the use of space within a generation as the unintended consequences of human activity undermine its promise (Benko and Schrogl, 1997a). Earth’s orbit now has to be seen as a ‘fragile environment’ for human activity (Benko and Schrogl, 1997a; Williamson, 2006). A 1972 UN Convention established that the ‘launching state’ is liable for any damage caused by its activities or by nongovernmental entities operating under its jurisdiction. In terms of damage caused by debris in outer space, if fault can be established then financial reparation must be made to restore damage to people or property. There is therefore, in principle, a mechanism for establishing accountability. Lotta Viikari (2008) still holds out hope for the development of Environmental Impact Assessments and the extension of ‘polluter pays’ principles to space debris (page 20). This convention breaks down, however, in a ‘supercritical’ space environment in which it becomes increasingly difficult for a claims commission to establish cause, fault, and damages (Zhao, 2004). Due to the impossibility of establishing fault, no claims for compensation have ever been settled in regard to space debris (Kai-Uwe Schrogl, personal communication, October 2010). As international law only considers direct damage between states and their corporations, there is no incentive to protect the space environment itself (Brearley, 2005, page 26). As the shortcomings of the system of accountability have become increasingly apparent, measures to address the space debris issue have been agreed by international bodies. NASA guidelines having already been established following a commitment by President Reagan (in consultation with industry), the 1999 UN report detailed a number of possible strategies for dealing with the space debris issue. Firstly, space objects should avoid releasing debris as part of their normal operations, avoid on-orbit explosion (eg, by venting energy sources), and be disposed of at the end of their lifetimes, either by reducing their orbit so that they reenter the atmosphere more quickly or by moving them to a ‘disposal’ or ‘graveyard’ orbit further from the Earth, though neither is risk-free (Rex, 1998). Secondly, space object designers should protect them with adequate shielding and collision avoidance mechanisms. Many of these guidelines have since been reiterated in 2002 Inter-Agency Space Debris Coordination Committee guidelines and were eventually accepted by the UN in 2008. The possibility but incalculability of a future collision cascade is a prime example of late-modern risk. It is particularly interesting to note that the reports were also marked by the paradox of risk modelling in a reflexive society (Beck, 2009, page 136): scientists attempted to incorporate responses to their predictions into the predictions themselves, thus reducing the predicted risk on which these responses were supposedly based. But the degree of voluntary **international cooperation** in response to the issue of space debris appears to vindicate Beck’s optimism about a cosmopolitanism ‘from above’, shared with others such as David Held [and echoed in regard to space debris by David Wright (2009, page 10)]. **There are, however, reasons to be sceptical**. In an excellent paper on sovereignty in outer space, Jill Stuart (2009) contrasts Held’s (2002) cosmopolitan sovereignty with regime theories based on the Realpolitik of state confrontation [or Everett Dolman’s (2002) ‘Astropolitik’, on which see Fraser MacDonald (2007) for a critique]. Cosmopolitan sovereignty is based on a cosmopolitan consciousness both influencing and influenced by **international cooperation** in outer space (eg, the International Space Station). Stuart argues that the declining importance of the nation-state resonates with the ‘overview effect’ of viewing a borderless Earth from space (White, 1987). Despite her optimism, Stuart is aware that there are serious issues with Held’s cosmopolitanism, especially when applied to outer space. There is good reason to believe that the **apparent** **cosmopolitanism** of human activity in outer space is an **ideological smokescreen** behind which **neoconservative policies** are being pursued (see, for example, Caldicott, 2002). In his analysis of images of Earth taken from space, Denis Cosgrove (1994) identifies both a ‘One World’ discourse that views a globally connected world as the project of a modern Christian American **imperialism**, and a ‘Whole Earth’ vitalist environmentalism that sees Earth as fragile, isolated organic unity. “Each”, however, “effectively exemplifies the Apollonian urge to re-establish a **transcendental**, univocal, and universally valid vantage point from which to sketch a totalising discourse” (page 288). Both thus erase locality. Hans Magnus Enzensberger (1996) also tears apart the ‘spaceship Earth’ ideology reflected in White’s overview effect, arguing that **the illusion of a unified Earth serves only to disguise inequalities of power**. **The lack of accountability** for space debris actually **polarises** international interest in **space debris mitigation**. States such as **the US** that rely on the ‘space operating environment’ **to exercise control over social order** (see Dickens and Ormrod, 2009), and that have an economic interest in maintaining **capital growth** in outer space, have a long-term interest in mitigating against debris [although the US withholds high-quality data because of security concerns (Rincon, 2009)]. States with only a short-term interest in space, such as Indonesia, have not been willing to mitigate space debris (Benko and Schrogl, 1997a). **Rational actor theory** has been employed to argue both that the major spacefaring nations will be willing to mitigate space debris voluntarily (Brearley, 2005) and that international agreements are necessary (Viikari, 2008). Such theory reaches its limits here as it cannot cope with the differing political and economic interests within states and their temporal nature. Even when alliances and agreements hold, it must be questioned whether the current trajectory of space debris mitigation serves the interests of a global public. As Enzensberger (1996) observes, industrial measures to protect the environment either serve to concentrate capital in the hands of larger companies as smaller companies cannot finance their own mitigation systems, or they manifest themselves as costs to the public (page 26). Viikari (2008, page 24) suggests **the former is also true of competing spacefaring states**. Viikari nonetheless advocates a system wherein ‘environmental losers’ could receive other benefits. Neil Smith (2009) anticipates the developmentof **outer space** becomingthe next stage in the extensive **expansion of capitalism**. He also makes clear, in relation to carbon trading on Earth, that a system such as Viikari proposes would neither protect the nearby space environment nor spread the benefits of space activity more equally (it merely represents ‘**the vertical integration of nature into capital’**). The costs borne by the public, meanwhile, include those associated with debris-monitoring and with state mission compliance with international guidelines. There has also been discussion of developing lasers, tethers, and slings to drag debris out of orbit (ESA, 2005), all of which introduce their own forms of risk. A contract to develop such technology would benefit one space technology company or another but the cost would be borne by the public, as recently demonstrated by NASA’s $1.9 million award to Star Technology and Research to develop the ElectroDynamic Debris Eliminator (Chang, 2012). **Commercial sector compliance** with voluntary codes of practice **is** understandably **low** as **it can be extremely costly and organisations** within the sector **cannot be held responsible** in the event of catastrophe. Nor does capital, as an abstract and fluid entity, have any interest in the long-term future of the space environment. **Satellites fix capital for a decade, but their investors have no concern for the future beyond this**. Whether or not guidelines are forced on commercial operators will depend on the relationship between states or suprastates and capital. While the costs of mitigation are seen to undermine commercial viability it is unlikely that procedures will become compulsory. This includes the possibility of a launch tax, which would fly in the face of legislative trends in US space policy. Compulsory measures are more likely, however, if major stakeholders in the space industry become the ones to profit from them. European company EADS Astrium has funded £1 million in research into the CubeSail project at the Surrey Space Centre in the UK. The CubeSail is intended to drag satellites out of orbit at the end of their lifetimes. EADS is a major state contractor as well as a commercial operator. France has recently made it law that satellites under its jurisdiction must be deorbited after twenty-five years. There are profits to be made by Astrium if other countries follow suit. The politics of space debris call into question Beck’s assertion that the old alliances between the state, capital, and science are over. In recent work, Beck (2005, page 138) makes clear that he believes **the transnational logic of capital trumps the power of states**. But this work lacks the attention to the complexity of relationships between neoliberal and neoconservative politics that characterises the work of David Harvey (2003). Harvey argues that states vacillate historically between protecting regional interests and opening borders. The creation of larger and larger alliances of states is one potential outcome of this process. It may be that international state alliances in one form or another take responsibility for space debris. But Harvey reminds us that, firstly, these ‘cosmopolitan’ agreements do not represent the public interest but exist to safeguard capital accumulation, and, secondly, that they are always prone to dissolution. **None of the parties involved support the measure most certain to improve orbital pollution, which is to stop (or limit) the launch of objects into orbit** (UN, 1999). Instead, the solutions being pursued only serve to deepen the contradiction between those who benefit from risk mitigation and those who bear the costs. As attention to the problem grows, **the perceived impending catastrophe appears to demand an immediate technological solution that actually obscures the politics at work** [see de Goede and Randalls (2009); see also Swyngedouw (2007) on catastrophism and climate change].

#### Don’t you realize? You’ve missed the bus – repression through expression is the new mode of domination – the fact that you can speak with such vindictiveness despite not being able to close line five shows the will to secure your stance in the political battle against climate change fought on the sidelines – they have separated the progressive stance into a social modality – to vote greener and change the way we debate through education – this is the form that Chell and BP take when creating eco-footprints – the offload onto the consumer – onto a judge – just cut cars out of your life after this round and we can fix the impacts!

Galloway 07. Alexander Galloway, professor of media, culture, and communication at New York University, Radical Illusion (A Game Against), Games and Culture 2:4, pg. 385

There exist causes from whose nature some effect does not follow. There exist causes that preempt their own effects from coming to be. In an early text from 1969, “Play and the Police,” Baudrillard (2001a) speaks of a “principle of separation.” This principle is how he rethinks repression not through the notions of negation, aggression, or vital forces being blocked but through the concepts of ambiance, integration, and participation. The “unity of desire” is broken, he suggests, into a never ending series of private-sphere negotiations. The question becomes Am I liberated? not Are we? “The separative cause, which bursts through the unity of desire and establishes human activity across several zones . . . is most effective at neutralizing energies” (Baudrillard, 2001a, pp. 18-19). Thus, in what Deleuze would describe later as the distinction between discipline and control, Baudrillard here posits a model of repression through expression, a stunting of the drives through the very facilitation of those drives into new control spaces. A new ambiance permeates the social field. The masses are not repressed, no never, they are allowed to dream! With reference to Marcuse’s concept of “repressive desublimation,” Baudrillard (2001a) calls this “the repression of desire . . . through the emancipation of needs” (p. 20). Again, “they did it, but we wanted it.” The separative cause reveals how ideology and reification operate under neoliberalism. Summarize it like this: Exploitation is material, liberation is semiotic. The material is the realm of political failure; the social is the realm of utopian compromise. In Baudrillard, the principle of separation is the principle by which the two are segregated and divided into two distinct domains, the one to play the fool for the other. The separative cause has two steps. To achieve some semblance of pedagogical coherence, I will telescope them into a cause-and-effect narrative, but to be precise, Step 1 and Step 2 both happened at the same time. In Step 1, the given phenomenon, which exists primordially as an undivided prob- lematic containing both progressive and reactionary political impulses, is first separated into (a) a material modality and (b) a social modality. For example, with global warming, there is the material modality of carbon dioxide emissions, automobiles and roads, the oil industry, and so on, while at the same time there is the symbolic social modality of desiring clean air, “thinking green,” and the so-called awareness campaigns. The principle of separation occasions the phenomenon first through an alliance formed between the progressive political impulse and the domain of the social or public sphere. A progressive moral horizon of significant magnitude invests itself in the social sphere. This moral plane develops its own independent logic and will likely experience a flourishing cycle of achievement and resolution but always within the “symbolic” realm of the social or public sphere. From time to time, small material changes may be incorporated into the logic of moral resolution but only those minor enough not to impinge upon the superiority of the social. In Step 2, the progressive political impulse is negated and as negation finds its home in the domain of the material. Thus a reactionary political project blossoms within the realm of the physical world. This project realizes its ends, developing the necessary mechanisms and infrastructures required to continue and grow. In Baudrillard, the separative cause is this overall structure. What the separative cause occasions, or “makes present,” is the ability for both gratuitous exploitation and a heightened moral instinct to coexist within the same universe. It is perhaps seen best in Baudrillard’s controversial critique of sexual liberation in Part 1 of Seduction. A structure of both liberation and deferral, of dazzlement and insight, of both ignorance and realization, of both expression and silence—all sides unify together but only at the cost of a complete and incontrovertible segregation between the symbolic and the material. The progressive stance of the one allows for the reactionary stance of the other. The end result is the current state of affairs: an oil company that is nevertheless “green,” a world bathed in blood but devoted to peace, a global consumer product that is still tagged “fair trade.” The separative cause occasions. But it occasions a “presence,” a presence that must be crossed out or held in suspension with quotation marks. The presence occasioned by the separative cause is in fact an abatement of presence, a lessening of being. What it makes present is a structure of suspension. A “subject” is the name given to those entities able to flourish within such a structure of suspension. As Baudrillard was able to see, most all phenomena in contemporary life are occasioned through this “separative cause” or principle of separation. The environmental movement is a perfect example. In today’s world, it is structurally impractical if not outright impossible to be an environmentalist in any true sense. Imagine: An activist drives to a rally against global warming. The contradiction is clear. His actual spiritual liberation is undercut by the tailpipe fumes of his own expression. His intentions are good, but there is a physical base—that depraved automobile contraption—that creates conditions of impossibility that are symbolically if not practically insurmountable. Of course, many today refuse to participate in the global system of environmental exploita- tion by casting off all worldly possessions. But this comes at the cost of complete withdrawal from the world system, a price too high to pay for most. Like the computer at the heart of today’s planetary organization, the costs are thus binary in that they offer an all-or-nothing option, but only an “option” insofar as the nothing is reified into material reality and the all spins on into oblivion. This is how the separative cause operates. Other examples include the curious and no doubt tense axis of inaction forged between the United Nations and American foreign policy after the new millennium on issues such as Darfur peace: the symbolic assertion on the side of the United States that, in no uncertain terms, “this is genocide,” flanked only by a negation of that same claim in abandonment and blindness within the realm of real material commitment. Or consider the structural adjustment agreements of the International Monetary Fund, which travel on wings of hope to the so-called backward economies of the globe but carry enclosed the harshest austerity measures, leaving the infected country with a curse of legalized deterritorialization and fiscal and cultural subjugation for decades to come. Exploitation is material, liberation is semiotic. This is how the separative cause occasions, or brings to presence, certain phenomena in today’s global kingdom. The democratization of Iraq is realizable only through subjugation; clean air is realizable only through a futures market in “pollution credits”—and around and around. Might this separative cause be also known by a synonym twin, “civilization”? In Baudrillard, the term was simply the real. It occasions real human worlds by allowing them to come to be.

#### When confronted with the ethical injunction of the aff, respond with “I would prefer not to”—vote neg on presumption

Baudrillard 98 (Jean, Ex-Prof of Media and Philosophy @ EGS, Paroxysm, p 60//shree)

JB: The paradox of liberation is that the people liberated are never the ones you think: children, slaves, women or colonial peoples. It’s always the others liberating themselves from them, getting rid of them in the name of a principle of freedom and emancipation. Hence the dramatic concern of children to ensure that parents don’t stop being parents, or at least that they do so as late as possible. Hence the collective concern to beg the State not to stop being the State, to force it to take on its role, whereas it’s constantly trying to relinquish that role—and with good reason. The State is constantly ‘liberating’ the citizens, urging them to look after themselves—something they generally don’t want to do at all. In this sense, we’re all potential Bartlebys: ‘I would prefer not to’. Be free! Be responsible! Take responsibility for yourself!—‘I would prefer not to’. Preferring not to, rather than willing something (Philippe Lancon, Liberation). Preferring not to any more. Not to run any more, or compete, or consume, and not, at any price, to be free. This is all part of the pattern of a repentance of modernity, of a subtle indifference which senses the dangers of a responsibility and an emancipation which are too good to be true. Hence the currently triumphant sentimental, familial, political and moral revisionism, which can take on the more violent aspect of a ‘reactionary’ hatred of oneself or others, the product of the disillusionment that follows liberatory violence. This opposite tide, this ‘regressive’ resublimation, is the contemporary form—and, so to speak, the consequence—of the repressive desublimation analysed by Marcuse. Decidedly, freedom isn’t simple, and liberation even less so.

## Case

### Space Congestion

#### Cap collapsing now – most recent ev

**IMT 21** (World Perspectives 2021: a global epoch of revolution is being prepared https://www.marxist.com/a-worldwide-epoch-of-revolution-is-being-prepared.htm International Marxist Tendency 30 July 2021 Accessed 8-13-2021) CSUF JmB + meza Work Week

The nature of perspectives The present document, which should be read in conjunction with the one we produced in September 2020, will be somewhat different to world perspectives documents that we have issued in the past. In previous periods, when events were moving at a more leisurely pace, it was possible to deal, at least in outline, with many different countries. Now, however, the pace of events has accelerated to the point where in order to deal with everything, one would need a whole book. The purpose of perspectives is not to produce a catalogue of revolutionary events, but to uncover the fundamental underlying processes. As Hegel explained in the Introduction to the Philosophy of History: “It is in fact, the wish for rational insight, not the ambition to amass a mere heap of acquisitions, that should be presupposed in every case as possessing the mind of the learner in the study of science.” We are dealing here with general processes, and can only look at a few countries which serve to illustrate most clearly those processes at this stage. Other countries will, of course, be dealt with in separate articles. Dramatic events The year 2021 commenced with dramatic events. The crisis of world capitalism is making waves that are spreading from one country and continent to another. On all sides, there is the same picture of chaos, economic dislocation and class polarisation. The new year barely began before a far-right mob stormed the US Capitol Building in Washington at the urging of former US president, Donald Trump – giving the centre of Western imperialism the appearance of a failed state. These events, coupled with the vastly larger Black Lives Matter protests last summer, show how deep the polarisation of US society has become. In addition to this, big protests in India, Colombia, Chile, Belarus and Russia demonstrated the same process: the masses’ resentment is growing, and the ruling class is failing to govern in the old ways. A global crisis like no other These world perspectives are unlike any other we have dealt with in the past. They are enormously complicated by the pandemic that is hanging like a black cloud over the entire world, subjecting millions to misery, suffering and death. The pandemic still rages out of control. At the moment of writing, there have been more than 100 million cases worldwide, and almost three million deaths. These figures are unprecedented outside a world war. And they continue to rise inexorably. This terrible scourge has had a devastating effect in poor countries around the world and has also seriously affected some of the richest countries. In the USA there are 30 million cases, and the number of deaths has gone over the half a million mark. And Britain has among the highest number of deaths per head of the population: over 4 million cases, and well over 100,000 deaths. The present crisis is therefore not like an ordinary economic crisis. This is literally a life-and-death situation for millions of people. Many of these deaths could have been avoided with proper measures early on. Capitalism cannot solve the problem Capitalism cannot solve the problem: it is itself the problem. This pandemic serves to expose the intolerable divisions between rich and poor. It has revealed the deep fault lines that divide society. The line between those who are condemned to get sick and die, and those who are not. It has laid bare the wastefulness of capitalism, its chaos and inefficiency, and is preparing class struggle in every country in the world. Bourgeois politicians like to use military analogies to describe the present situation. They say we are at war with an invisible enemy, this terrible virus. They conclude that all classes and parties must unite behind the existing government. But a yawning gulf separates words from deeds. The case for a planned economy and international planning is unanswerable. The crisis is worldwide. The virus does not respect frontiers or border controls. The situation demands an international response, the pooling of all scientific knowledge and the mobilisation of all the resources of the planet to coordinate a genuine global plan of action. Instead, we have the unedifying spectacle of the row between Britain and the EU over scarce vaccines, while some of the poorest countries are virtually denied access to any vaccines at all. But why is there a scarcity of vaccines? The problems of vaccine production – to cite just one example – are a reflection of the contradiction between the urgent needs of society and the mechanisms of the market economy. If we were really at war with the virus, governments would mobilise all their resources on this one task. From a purely rational point of view, the best policy would be to ramp up vaccine production as fast as possible. Capacity needs to be expanded, which can only be done by setting up new factories. But the big private vaccine manufacturers have no interest in expanding production massively because they would be financially worse off if they did. If they ramped up production capacity so that the whole world was supplied within six months, the newly built facilities would stand empty immediately afterwards. Profits would then be much lower compared with current scenarios, where existing plants produce at capacity for years to come. Yet another obstacle to mass production of the vaccine is the refusal of Big Pharma to relinquish intellectual property rights over “their own” vaccines (in most cases developed with massive amounts of state funding) so that other companies would be able to produce them cheaply. Pharmaceutical companies are making tens of billions in profits, but problems with both production and supply mean shortages everywhere. In the meantime, millions of lives are at risk. Workers’ lives at risk In their haste to get production (and therefore profits) moving again, politicians and capitalists resort to cutting corners. Workers are sent back to crowded workplaces without adequate protection. This is equivalent to passing a death sentence on many of these workers and their families. All the hopes of the bourgeois politicians were based on the new vaccines. But the rollout of vaccines has been bungled, and the failure to control the spread of the virus – which increases the risk of new vaccine-resistant strains developing – has serious implications, not just for human lives and health, but also for the economy. Economic crisis The present economic crisis is the most severe in 300 years, according to the Bank of England. In 2020, the equivalent of 255 million jobs were lost worldwide, four times more than in 2009. The so-called emerging economies are being dragged down with the rest. India, Brazil, Russia, Turkey are all in crisis. South Korea’s economy shrank last year for the first time in 22 years. That was despite state subsidies worth about $283 billion. In South Africa, unemployment reached 32.5 percent and GDP contracted by 7.2 percent in 2020. This is a greater contraction than in 1931 during the Great Depression, and this in spite of spending the equivalent of 10 percent of GDP in a fiscal stimulus package. The crisis is plunging millions of people ever deeper into poverty. In January 2021, the World Bank estimated that 90 million people will be pushed into extreme poverty. The Economist of 26 September 2020 wrote: “The United Nations is even gloomier. It defines people as poor if they do not have access to things like clean water, electricity, sufficient food and schools for their children. “Working with researchers from Oxford University, it reckons the pandemic could cast 490 million in 70 countries into poverty, reversing almost a decade of gains.” The United Nations’ World Food Programme put it in these terms: “Across 79 countries with WFP operational presence and where data are available, up to 270 million people are estimated to be acutely food insecure or at high risk in 2021, an unprecedented 82 percent increase from pre-pandemic levels.” This alone gives one an idea of the global scale of the crisis. In addition to the effects of the pandemic, the global ecological crisis will likely aggravate this situation, fuelling poverty and food insecurity. Capitalist exploitation of the environment threatens to put key ecological systems on the edge of collapse. We have seen an increase in conflicts over scarce water resources and environmental destruction that will inevitably lead to social instability and massive climate migration. The general instability around the world is organically linked to growing poverty. It is both cause and effect. It is the most fundamental underlying cause of many of the wars and civil wars taking place. Ethiopia is just one example of this. Ethiopia was presented as a model. In the period of 2004 to 2014 its economy was growing by 11 percent a year, and it was seen as a country to invest in. Now it has been thrown into turmoil with the outbreak of fighting in Tigray province, where 3 million people are in need of emergency food relief. This is not an isolated case. The list of countries affected by wars in the past period is very long, and the catalogue of human suffering appalling: Afghanistan: two million deaths; Yemen: 100,000 deaths; the Mexican drug wars have led to over 250,000 killed; the war against the Kurds in Turkey, 45,000 deaths; Somalia, 500,000 deaths; Iraq, at least one million deaths; South Sudan around 400,000 deaths. In Syria, the United Nations estimated the number of deaths at 400,000, but this seems too low. The real figure may never be known but is sure to be 600,000 at least. In the terrible civil wars in the Congo, probably over four million people perished. But there again, nobody knows the real figure. More recently we had the conflict in Nagorno-Karabakh. And so the list goes on and on. Such things are no longer considered suitable for the front pages of newspapers. But they express very clearly what Lenin once said: Capitalism is horror without end. The continued existence of capitalism threatens to create the conditions of barbarism in one country after another. A crisis of the regime From a Marxist point of view, the study of economics is not an abstract academic question. It has a profound effect on the development of consciousness of all classes. Everywhere we look now there is a crisis, not just an economic crisis, but a crisis of the regime. There are clear indications that the crisis is so severe, so deep, that the ruling class is losing control of the traditional instruments they used in the past for running society. As a result, the ruling class finds itself increasingly unable to control events. That is particularly clear in the case of the USA. But it also applies to many other countries. It is sufficient to mention the names of Trump, Boris Johnson and Bolsonaro to underline the point. USA The USA now occupies a central place in world perspectives. For a very long time, revolution in the richest and most powerful nation on earth seemed to be a very distant prospect. But the USA was hit very hard by the world economic crisis and now everything has been turned upside down. 68 million Americans filed for unemployment during the pandemic, and as always it is the poorest and most vulnerable, especially the people of colour, who suffer most. The scourge of unemployment falls most heavily on the shoulders of the youth. A quarter of under-25s have been thrown out of work. Their future has suddenly been taken away. The American dream has become the American nightmare. This dramatic change has forced many people, old and young, to reconsider views that they previously considered sacrosanct and question the very nature of the society in which they live. The rapid rise of Bernie Sanders at one end of the political spectrum and Donald Trump at the other set the red light flashing for the ruling class. This kind of thing was not supposed to happen! Alarmed at the danger posed by this situation, the ruling class was compelled to take emergency measures. Let us remind ourselves that, according to the official dogma of bourgeois economists, the state was not supposed to play any part in economic life. But faced with looming disaster, the ruling class was forced to throw all the accepted economic theories into the dustbin. The same state which, according to free-market theory, should play little or no role in economic life, has now become the only thing propping up the capitalist system. In all countries, starting with the USA, the so-called free market economy is really on a life support system, like a coronavirus patient. Most of the money handed out by the state went straight into the pockets of the rich. But the ruling class feared the political consequences of yet another corporate bailout. They therefore gave grants to every resident and massively boosted unemployment benefits. This cushioned the impact of the crisis on the poorest layers. At some point, these supports will be cut back or withdrawn altogether. We have the paradox of the most terrible poverty in the richest country in the world existing side by side with the most obscene wealth and luxury. By October 2020, more than one in five American households did not reliably have enough money for food. Food banks are proliferating. Inequality and polarisation Levels of inequality have broken all records. The gulf between rich and poor has become transformed into an unbridgeable abyss. In 2020 the wealth of the world’s billionaires grew by $3 .9 trillion. The Nasdaq 100 index is 40 percent higher than before the pandemic. Listed global equities, as of February 2021 had risen in value by $24 trillion since March of 2020. The average chief executive of an S&P 500 company earns 357 times as much as the average non-supervisory worker. The ratio was around 20 in the mid-1960s. It was still 28 at the end of Ronald Reagan’s term in 1989. To quote just one example, Jeff Bezos now makes more money per second than the typical US worker makes in a week. This takes America back to the times of the capitalist robber barons that Theodore Roosevelt denounced before the First World War. And this has an effect. All the demagogy about the ‘national interest’, that ‘we must unite to fight the virus’, ‘we are all in the same boat’, stands exposed as the vilest hypocrisy. The masses are prepared to make sacrifices under certain circumstances. In times of war, people are prepared to unite to fight a common enemy, that is true. They are prepared, at least temporarily, to accept lower living standards and also, to some extent, restrictions on democratic rights. But the gulf separating the haves from the have-nots is deepening the social and political polarisation and creating an explosive mood in society. It undermines all the efforts to create a sensation of national unity and solidarity, which is the main line of defence for the ruling class. Federal Reserve statistics show that the richest tenth in the US had a net worth of $80.7 trillion at the end of 2020. That means 375 percent of GDP and far above historical levels. A five percent tax on that would yield $4 trillion, or one fifth of GDP. It would pay for all the costs of the pandemic. But the rich robber barons have no intention of sharing their plunder. Most of them (including Donald J Trump) show a marked disinclination to paying any tax at all, let alone five percent. The only solution would be the expropriation of the bankers and capitalists. This idea will inevitably gain more and more support, sweeping away the remaining prejudices against socialism and communism, even among those layers of workers who have been bamboozled by the demagogy of Trump. This is already causing concern among the serious strategists of capital. Mary Callaghan Erdoes, head of assets and wealth management for JP Morgan, drew the inevitable conclusion: “You’re going to get a very high risk of extremism coming out of this. We have to find some way to adapt, otherwise we’re in a very dangerous situation.” The assault on the Capitol The attack on the Capitol on 6 January was a graphic indication that what the USA now faces is not a crisis of government, but a crisis of the regime itself. These events were neither a coup nor an insurrection, but they glaringly exposed the raw anger that exists in the depths of society and also the emergence of deep rifts in the state. At bottom, what they indicate is that the polarisation in society has reached a critical point. The institutions of bourgeois democracy are being tested to destruction. There is a burning hatred of the rich and powerful, the bankers, Wall Street and the Washington establishment in general (“the swamp”). This hatred was skilfully channelled by the right-wing demagogue, Donald Trump. Of course, Trump himself is only the most cunning and voracious alligator in the swamp. He is merely pursuing his own interests. But in doing so, he seriously damaged the interests of the ruling class as a whole. He has played with fire and conjured up forces that neither he, nor anyone else, can control. By word and deed, Trump was destroying the legitimacy of bourgeois institutions and creating huge instability. That is why the ruling class and its political representatives everywhere are horrified by his conduct. The impeachment The Democrats tried to impeach Trump, accusing him of organising an insurrection. But they predictably failed to get the Senate to convict him, which would have barred him from standing for public office in future. Most Republican senators would have been very glad to do this. They hate and fear this political upstart. And they knew very well who was behind the events of 6 January. The Republican Senate leader Mitch McConnell delivered a damning verdict on the ex-President, after voting to acquit him. In reality, he and the other Republican senators were terrified of the reaction of Trump’s angry followers if they took that fateful step. They decided that discretion is the better part of valour and, holding their noses, voted not guilty. But if this was an attempted insurrection it was a very poor one. Rather than an insurrection, it resembled a large-scale riot. The mob of angry Trump supporters burst into the Capitol with the obvious connivance of at least some of the guards. But, having easily gained possession of the Holy of Holies of US bourgeois democracy, they had not the faintest idea of what to do with it. The disorganized and leaderless mob milled around aimlessly, trashing anything they took a dislike to and shouting bloodthirsty threats against Democrat Nancy Pelosi, Republican vice-President Mike Pence and Mitch McConnell, who they accused of betraying Trump. Meanwhile, the insurrectionaries’ Commander-in-Chief had conveniently disappeared. If history repeats itself, first as a tragedy and then as a farce, this was a farce of the purest water. In the end, nobody was hanged or sent to the guillotine. Tired out by so much shouting, the “insurrectionists” went home quietly or retired to the nearest bar to get drunk and boast of their courageous exploits, leaving behind nothing more threatening than a pile of rubbish and a few bruised egos. Nevertheless, from the point of view of the ruling class, it set a dangerous precedent for the future. Ray Dalio, founder of the world’s largest hedge fund, Bridgewater Associates, had this to say: “We’re on the brink of a terrible civil war. The US is at a tipping point in which it could go from manageable internal tension to revolution.” The storming of the Capitol was a serious warning to the ruling class. And this will undoubtedly have consequences. Despite a barrage of media hostility, 45 percent of registered Republicans thought that it was justified. But this has to be compared with the far more significant fact that 54 percent of all Americans thought that the burning down of the Minneapolis police precinct was justified. And 10 percent of the whole population took part in the Black Lives Matter protests – 20,000 times more than those who stormed the Capitol. All this shows the rapid growth of social and political polarisation in the United States. The spontaneous uprisings that swept the USA from coast to coast following the murder of George Floyd, and the unparalleled events that preceded and followed the presidential elections marked a turning point in the entire situation. Changes in consciousness The stupid liberals and reformists naturally understand nothing of what is happening. They only see the surface of events, without understanding the deeper currents that are flowing strongly beneath the surface and impelling the waves. They constantly shout about fascism, by which they mean anything they dislike or fear. About the real nature of fascism, they know absolutely nothing. That goes without saying. But by constantly harping on the “danger to democracy” (by which they mean formal bourgeois democracy) they sow confusion and prepare the ground for class collaboration under the flag of “the lesser evil”. Their support for Joe Biden in the USA is a very clear example of this. What we have to take account of is that Trump’s base has a very heterogeneous and contradictory character. It contains a bourgeois wing, headed by Trump himself, and a large number of reactionary petty bourgeois, religious fanatics and openly fascist elements. But we must remember that Trump received 74 million votes in the last election and many of these were working-class people who previously voted for Obama but are disillusioned with the Democrats. When they are interviewed, they say: “Washington doesn’t care about us! We’re the forgotten people!” There are violent swings to the left and also to the right. Nature abhors a vacuum, however, and because of the complete bankruptcy of the reformists, including the left reformists, this mood of anger and frustration has been capitalised upon by right-wing demagogues, so-called populists. In the USA we have the phenomenon of Trumpism. in Brazil we saw the rise of Bolsonaro.

#### Collapse creates sustainable living

**Powers ’11** (William is a senior fellow at the World Policy Institute. He has worked for more than a decade in development aid and conservation in Latin America, Africa, and Washington.) World Policy Journal, "Finding Enough: Confessions of a secular missionary," Project Muse, AM)

In October 2011, I visited the University of Minnesota's Humphrey Institute of International Affairs to give a talk entitled "What's Your 12 × 12?" In the audience were professionals and intellectuals from more than a dozen developing countries. I was expecting a wholesale rejection of the "voluntary simplicity" concept. After all, these were all successful developing-country elites who were benefiting from rapid economic growth and increasing prosperity. But the **overwhelming consensus** in the room was that reducing consumption is more than a survival imperative. It **is actually a more desirable way to live**. One audience member, a thirty-something man from China, described the contentedness of his childhood, growing up in a 10-foot-by-15-foot house -- the solidarity it brought, the freedom from clutter and distraction. Others spoke of the need to ratchet up living standards, but only to a point that would allow for an intelligent, holistic balance between doing and being -- just enough, and not more, food, shelter, fresh air, family and friendship. At a certain point in my "development" career, I began to question the whole notion of impoverishment. Indeed, most of the so-called "impoverished beneficiaries" of my programs seemed better off than me. They wore bigger smiles. They engaged more easily in the moment. Through their kinship networks and close relationship with the land, they achieved a greater sense of meaning and purpose. I talked with these folks everywhere from the Gambian coast to the Amazon, and the vast majority told me they would not trade their lifestyle -- with its simplicity and rootedness -- for mine, despite the obvious difference in wealth and mobility. I do not mean to glorify material destitution. I've spent many hours with some of the millions of people for whom a 12 × 12 would represent an unattainable level of prosperity -- luxury, even. They live zero-by-zero, with no lush organic gardens, no gently flowing creek, no shelter at all. They live in what you might call the Fourth World -- those anarchic, failed places where community and basic necessities have been decimated by war, famine, and natural disaster. So, when discussing relatively "poorer" countries, I always make a clear, explicit distinction between people living in a state of material destitution and people living healthy subsistence lifestyles. There's a point where one's material life is in balance -- possessing neither too much nor too little. Roughly one-fifth of humanity has too much and is overdeveloped; another fifth or so has too little, and is underdeveloped. Neither of these groups experiences general well-being. The former can rarely experience the simple joy of being. The latter are so destitute that they can't sustain their bodies physically. Fortunately, the third group -- those with enough -- is by far the largest. It is what I redefine as "sustainably developed," ranging from subsistence livelihoods like the Mayans of Guatemala to the economic level of the average Western European in 1990. By this rough calculation, **60 percent of the world lives sustainably**. In other words, if everyone lived as they did, our one planet would suffice to feed, clothe, shelter, and absorb the waste of everyone.

#### No space war – it’s hype and systems are redundant

Johnson-Freese and Hitchens 16 [Dr. Joan Johnson-Freese is a member of the Breaking Defense Board of Contributors, a Professor of National Security Affairs at the Naval War College and author of Space Warfare in the 21st Century: Arming the Heavens. Views expressed are those of the author alone. Theresa Hitchens is a Senior Research Scholar at the Center for International and Security Studies at Maryland (CISSM), and the former Director of the United Nations Institute for Disarmament Research (UNIDIR) in Geneva, Switzerland. Stop The Fearmongering Over War In Space: The Sky’s Not Falling, Part 1. December 27, 2016. https://breakingdefense.com/2016/12/stop-the-fearmongering-over-war-in-space-the-skys-not-falling-part-1/]

In the last two years, we’ve seen rising hysteria over a future war in space. Fanning the flames are not only dire assessments from the US military, but also breathless coverage from a cooperative and credulous press. This reporting doesn’t only muddy public debate over whether we really need expensive systems. It could also become a self-fulfilling prophecy. The irony is that nothing makes the currently slim possibility of war in space more likely than fearmongering over the threat of war in space.

Two television programs in the past two years show how egregious this fearmongering can get. In April 2015, the CBS show 60 Minutes ran a segment called “The Battle Above.” In an interview with General John Hyten, the then-chief of U.S. Air Force Space Command, it came across loud and clear that the United States was being forced to prepare for a battle in space — specifically against China — that it really didn’t want.

It was explained by Hyten and other guests that China is building a considerable amount of hardware and accumulating significant know-how regarding space, all threatening to space assets Americans depend on every day. If viewers weren’t frightened after watching the segment, it wasn’t for lack of trying on the part of CBS.

Using terms like “offensive counterspace” as a 1984 NewSpeak euphemism for “weapons,” it was made clear that the United States had no choice but to spend billions of dollars on offensive counterspace technology to not just thwart the Chinese threat, but control and dominate space. While it didn’t actually distort facts — just omit facts about current U.S. space capabilities — the segment was basically a cost-free commercial for the military-industrial complex.

In retrospect though, “The Battle Above” was pretty good compared to CNN’s recent special, War in Space: The Next Battlefield. The latter might as well have been called Sharknado in Space – because the only far-out weapons technology our potential adversaries don’t have, according to the broadcast, seems to be “sharks with frickin’ laser beams attached to their heads!”

First, CNN needs to hire some fact checkers. Saying “unlike its adversaries, the U.S. has not yet weaponized space” is deeply misleading, like saying “unlike his political opponents, President-Elect Donald Trump has not sprouted wings and flown away”: A few (admittedly alarming) weapons tests aside, no country in the world has yet weaponized space. Contrary to CNN, stock market transactions are not timed nor synchronized through GPS, but a closed system. Cruise missiles can find their targets even without GPS, because they have both GPS and precision inertial measurement units onboard, and IMUs don’t rely on satellite data. Oh, and the British rock group Pink Floyd holds the only claim to the Dark Side of the Moon: There is a “far side” of the Moon — the side always turned away from the Earth — but not a “dark side” — which would be a side always turned away from the Sun.

More nefariously, the segment sensationalized nuggets of truth within a barrage of half-truths, backed by a heavy bass, dramatic soundtrack (and gravelly-voiced reporter Jim Sciutto) and accompanied by sexy and scary visuals.

Make no mistake there are dangers in space, and the United States has the most to lose if space assets are lost. The question is how best to protect them. Here are a few facts CNN omitted.

The Reality

The U.S. has all of the technologies described on the CNN segment and deemed potentially offensive: maneuverable satellites, nano-satellites, lasers, jamming capabilities, robotic arms, ballistic missiles that can be used as anti-satellite weapons, etc. In fact, the United States is more technologically advanced than other countries in both military and commercial space.

That technological superiority scares other countries; just as the U.S. military space community is scared of other countries obtaining those technologies in the future. The U.S. military space budget is more than 10 times greater than that of all the countries in the world combined. That also causes other countries concern.

More unsettling still, the United States has long been leery of treaty-based efforts to constrain a potential arms race in outer space, as supported by nearly every other country in the world for decades. Indeed, under the administration of George W. Bush, the U.S. talking points centered on the mantra “there is no arms race in outer space,” so there is no need for diplomat instruments to constrain one. Now, a decade later, the U.S. military – backed by the Intelligence Community which operates the nation’s spy satellites – seems to be shouting to the rooftops that the United States is in danger of losing the space arms race already begun by its potential adversaries. The underlying assumption — a convenient one for advocates of more military spending — is that now there is nothing that diplomacy can do.

However, it must be remembered that most space-related technologies – with the exception of ballistic missiles and dedicated jammers – have both military and civil/commercial uses; both benign — indeed, helpful — and nefarious uses. For example, giving satellites the ability to maneuver on orbit can allow useful inspections of ailing satellites and possibly even repairs.

Further, the United States is not unable to protect its satellites, as repeated during the CNN broadcast by various interviewees and the host. Many U.S. government-owned satellites, including precious spy satellites, have capabilities to maneuver. Many are hardened against electro-magnetic pulse, sport “shutters” to protect optical “eyes” from solar flares and lasers, and use radio frequency hopping to resist jamming.

Offensive weapons, deployed on the ground to attack satellites, or in space, are not a silver bullet. To the contrary, U.S. deployment of such weapons may actually be detrimental to U.S. and international security in space (as we argued in a recent Atlantic Council publication, Towards a New National Security Space Strategy). Further, there are benefits to efforts started by the Obama Administration to find diplomatic tools to restrain and constrain dangerous military activities in space.

These diplomatic efforts, however, would be undercut by a full-out U.S. pursuit of “space dominance.” This includes dialogue with China, the lack of which Gen. William Shelton, retired commander of Air Force Space Command, lamented in the CNN report.

Given CNN’s “cast,” the spin was not surprising. Starting with Ghost Fleet author Peter Singer set the sensationalist tone, which never altered. The apocalyptic opening, inspired by Ghost Fleet, posited a scenario where all U.S. satellites are taken off-line in nearly one fell swoop. Unless we are talking about an alien invasion, that scenario is nigh on impossible. No potential adversary has such capabilities, nor will they ever likely do so. There is just too much redundancy in the system.

#### Chance of asteroids is tiny and no extinction

Robert **Walker 16**. Software Developer of Tune Smithy, Wolfson College, Oxford. 12-14-2016. "Why Resilient Humans Would Survive Giant Asteroid Impact." Science 2.0. https://www.science20.com/robert\_inventor/we\_wont\_go\_extinct\_after\_a\_major\_asteroid\_impact\_even\_96\_of\_species\_extinct\_0\_chance\_of\_humans\_extinct-187383

This is something you hear said so often - that we risk being hit by an asteroid that could make humans extinct. But do we really? This is the article I’m commenting on, a recently breaking news story: Earth woefully unprepared for surprise comet or asteroid, Nasa scientist warns. Some are already worrying that it means that we are all due to die in the near future from an asteroid impact. Well, no, it doesn't mean that. So, what is the truth behind it? The source of all this is a comment by Dr Joseph Nuth who warns: “But on the other hand they are the extinction-level events, things like dinosaur killers, they’re 50 to 60 million years apart, essentially. You could say, of course, we’re due, but it’s a random course at that point.” Photograph of comet Siding Spring by Hubble - right hand image is more processed. This comet did a close flyby of Mars and at one point was predicted to have a tiny chance of hitting Mars. In the end it missed Mars by more than a quarter of the distance from Earth to the Moon If you read the rest of the article, it’s a worthy goal, to prepare us for asteroid impacts of all sizes from the small Chelyabinsk one up to really large 10 km ones. There are a number of things potentially confusing about this statement however, if you read it as a non scientist. Although there is a risk of “mass extinction” if a large asteroid hit Earth, “mass extinction” there doesn’t mean “extinction of humans”, we are such a resilient species that we would certainly survive a giant asteroid impact. We are not “due” an extinction at all. Next giant impact is most likely to happen many millions of years into the future. As we'll see, there is almost zero chance of a giant impact in the next century. There is however much we can do to protect ourselves from smaller asteroids. As a result of extensive asteroid surveys over the last couple of decades: We can be pretty sure (as in perhaps 99.999999% sure) that there isn’t an extinction level asteroid headed our way in the next century. We know the orbits of all the Near Earth Asteroids that could do this and none will hit Earth over that timescale. That leaves comets, and the chance of that is something like 1 in 100 million per century, as a very rough guess (since 99% of the impacts are thought to be from asteroids). This risk has been pretty much retired due to the automated asteroid searches by the likes of Pan STARRS. But the chance of a smaller asteroid impact is still high enough to make it worth working on it, especially since this is the one natural hazard we can not only predict to the minute, decades in advance, with enough information but also prevent also, given a long enough timeline. We are already close to completing the survey of 1 km asteroids (90% done). With a bit more funding we could also find most of the asteroids down to 45 meters in diameter. As a result of new developments in the science of asteroid detection, this could be done for a cost of only $50 million to protect the entire Earth. We would then be able to deflect asteroids decades before they are due to hit, which is a far easier task than a last minute deflection. First when he said "You could say, of course, we’re due, but it’s a random course at that point.”" - that is a scientist speaking as a scientist. But of course people sharing this on social media, retweeting, writing new stories about it, pick up the “we are due” and omit the scientific qualification “but it’s a random course at that point”. To say that we are “due” a mass extinction is a bit like saying that after you throw nine heads, you are due to throw a tail. Not true. The chance that the next coin toss is a tail is always going to be 50/50 for a fair coin no matter how many heads you throw. It's the same with extinctions. So long as it is a random process, then an extinction that happens every 60 million years could happen tomorrow or it could be 60 million years or 120 million years before it happens. On average we would still expect to wait 60 million years for the next such mass extinction even if the last one happened hundreds of millions of years ago. It’s just as for the coin toss. Same for an extinction event of a size that happens every 100 million years. If you look at the diagram the big five are irregularly spaced. The last one happened 66 million years ago. But they are irregularly spaced so we can't conclude either that we need to wait 44 million years for the next big extinction either. Some scientists have tried to discern a periodicity in the extinctions of perhaps 26 to 30 million years. If they are right then we are due the next extinction perhaps 15 million years or so from now. But that is very controversial and if true, it wouldn’t cover all mass extinctions. At any rate that's so far into the future it makes no difference to us now, if they are right or wrong. We could get a mass extinction in the next few millions of years. But it is nearly impossibly unlikely in the next century.

T**ime frame – Kessler effect 200 years away.**

Peter **Stubbe**, PhD in law @ Johann Wolfgang Goethe University Frankfurt, **’17**, State Accountability for Space Debris: A Legal Study of Responsibility for Polluting the Space Environment and Liability for Damage Caused by Space Debris, Koninklijke Brill Publishing, ISBN 978-90-04-31407-8, p. 27-31

The prediction of possible scenarios of the future evolution of the debris p o p ulation involves many uncertainties. Long-term forecasting means the prediction of the evolution of the future debris environment in time periods of decades or even centuries. Predictions are based on models84 that work with certain assumptions, and altering these parameters significantly influences the outcomes of the predictions. Assumptions on the future space traffic and on the initial object environment are particularly critical to the results of modeling efforts.85 A well-known pattern for the evolution of the debris population is the so-called Kessler effect’, which assumes that there is a certain collision probability among space objects because many satellites operate in similar orbital regions. These collisions create fragments, and thus additional objects in the respective orbits, which in turn enhances the risk of further collisions. Consequently, the number of objects and collisions increases exponentially and eventually results in the formation of a self-sustaining debris belt around the Earth. While it has long been assumed that such a process of collisional cascading is likely to occur only in a very long-term perspective (meaning a time 1 n of several hundred years),87 a consensus has evolved in recent years that an uncontrolled growth of the debris population in certain altitudes could become reality much sooner.88 In fact, a recent cooperative study undertaken by various space agencies in the scope of i a d c shows that the current l e o debris population is unstable, even if current mitigation measures are applied. The study concludes:Even with a 90% implementation of the commonly-adopted mitigation measures [...] the l e o debris population is expected to increase by an average of **30% in the next 200 years.** The population growth is primarily driven by catastrophic collisions between 700 and 1000 km altitudes and such collisions are likely to occur every 5 to 9 years.89