### 1

#### We begin with a brief history of warfare, its disappearance and the reappearance of military informatics, logistics and digitalization. Warfare does not disappear for the desire of an ethical field of relations, but simply because it is obsolete. The reappearance of warfare is perpetual upgrading, a battlespace in potentia that predetermines all liberal guises of resistance. Warfare is not an event, it does not take place in some traditional understanding of ‘the happening of events,’ rather warfare is the Archimedean point that produces not just armies, weapons and tactics, but the real world itself. The 1AC’s fantasy of demilitarization, like the crossbows of the Great Italian Wars, is outdated. Warfare is all we know.

Öberg 19. Dan Öberg, Associate Professor of War Studies at the Swedish Defence University, his research focuses on the ontology of war, critical military studies and the thought of Jean Baudrillard, “Requiem for the Battlefield,” *The Disorder of Things*, January 13th, 2019, <https://thedisorderofthings.com/2019/01/13/requiem-for-the-battlefield/>, ar

If we look closely, we see that the real world begins, in the modern age, with the decision to transform the world, and to do so by means of science, analytical knowledge and the implementation of technology – that is to say that it begins, in Hannah Arendt’s words, with the invention of an Archimedean point outside the world (on the basis of the invention of the telescope by Galileo and the discovery of modern mathematical calculation) by which the natural world is definitively alienated. This is the moment when human beings, while setting about analyzing and transforming the world, take their leave of it, while at the same time lending it force of reality. We may say, then, that the real world begins, paradoxically, to disappear at the very same time as it begins to exist. (Jean Baudrillard, Why Hasn’t Everything Already Disappeared?) Antoine Bousquet’s excellent and much anticipated book The Eye of War: Military Perception from the Telescope to the Drone traces how the history of the rationalisation of vision and the mathematisation of space during the Renaissance have enabled an ever expanding martial gaze. Herein the reader, among many things, gets an in-depth look at the changing fields of military perception and the subsequent attempts to hide from its view. As the author notes, this development leads towards the dispersal and disappearance of the battlefield in its traditional sense.[1] In this intervention, I would like to put forward a complementary view of the battlefield in relation to the trajectory traced by the author. This view can be summarised as an insistence that from the end of the 18th century and onwards, the traditional battlefield starts to disappear as it is operationalised through military doctrines, planning, and conduct. Moreover, as a direct consequence, the battlefield reappears, refracted through military attempts to model space and time. Below I attempt to sketch out this dual process of disappearance and reappearance by engaging with the history of the military imaginary which both sees and targets, and which arguably corresponds to that martial gaze of which the book speaks so well. As The Eye of War illustrates, often through fantastic pictures and drawings from historical times, the introduction of new weapon-systems and their social interpretation influence the possibility of targeting and the remits of the battlefield. Historically, we may perhaps argue that varying conceptions of the battlefield have been part of warfare for as long as there has been strategic dispositions in war, evident particularly in attempts to connect tactical means with strategic ends. At times such connections have been drawn on spatially and temporally demarcated battlefields. However, at other times, we find examples of how the conception of the battlefield challenges such remits. For example, in medieval warfare when a strategy of attrition was employed to starve an opponent, the target was crops and the tactics was to put your army in the field, aggressively devastate the countryside, and live off the land. Here the battlefield expands and the target shifts from the enemy soldier to the milieu in which a system of production is established. Or when the strategy was one of plunder, the target was likely to be a poorly protected enemy fortress and the tactics assaulting its walls and exciting pay, while avoiding surrounding armies through manoeuvre. Consequently, the attempt to operationalise the tactical means into strategic ends, that is, the attempt “to target”, potentially constitutes and challenges the remits of the battlefield. That said, the characteristic of the classical battlefield was often a combination of disparate units, tactical conducts, and weapon-systems in gradual transition. One such transition during the Great Italian Wars (1494-1559) between two types of “targeteers”: the crossbowman and the arquebusier, is captured in Charles Oman’s classical work History of the Art of War in the Sixteenth Century. Oman (quoting Gascon Montluc) writes as follows regarding the French army: Arquebusiers were known, but there were very few of them in the early years of the war: it was only in the second generation that the arquebus superseded the cross-bow. Montluc remarks that in 1523, when he was ensign in the company of Monsieur de la Clotte, he had only six arquebusiers with him, and they were all deserters from the Spanish army.’Encore en ce temps la il n’y avait point d’arquebusiers parmi notre nation’. He then proceeds to remark that he wishes that the arquebus had never been invented.’Would to God that this unhappy weapon had never been devised, and that so many brave and valiant men had never died by the hands of those who are often cowards and shirkers, who would never dare to look in the face those whom they lay low with their wretched bullets…’ The day had gone by when a certain commander used to order that quarter should never be given to men carrying firearms, but they were still hated and despised, and it took some time to teach French generals that they must rather be encouraged, and introduced on the largest scale possible.’ This quote illustrates the shift from when the arquebus was rare and firearms were seen with hatred and contempt, towards a gradual acceptance of “their wretched bullets”, until we reach the point where their use was encouraged as part of all major armies. Beyond the fact that methods of warfare change due to the introduction of new weapon systems, this historical example illustrates an important aspect of the constant contestation of the traditional battlefield. The arquebusier doing the targeting (and thereby efficiently killing “so many brave and valiant men”) is present at the field of battle and at the same time hated, accepted, and encouraged. That is, the character of the battlefield is negotiated through the direct relationship between targeteer and target and their corresponding tactical means. Arguably, such negotiation between targeteer and target changes drastically in character from the Napoleonic wars and onward. With the risk of simplifying matters, we may say that from the medieval times up to the 18th century, the battlefield was characterised by a gradual homogenisation of units and their array. From a situation where warfare was dominated by disparate units and weapon systems, we move towards standardised infantry and cavalry based units and the use of firearms and bayonets. This is a homogenisation that mirrors the rise of modern society in a more general sense. However, it is not until the next century, with the French Grande Armée, particularly due to the administrative care of Lazare Carnot (1753-1823) and the military thinking of the likes of Comte de Guibert (1743-1790) that the military imaginary starts to view the battlefield as a consequence of military analysis and planning. That is, as an operational model. As is well known, the operational dimension of warfare comes up in part as a result of the levée en masse, responding to practical needs to oversee and manage a system of national mobilization with the training and movement of large-scale units. Technological innovations such as the railroad and the telegraph among others, also helped ushering warfare into this new era. It is from this time onward that the battlefield expands through logistics, new intelligence, new command structures, and the administrational machinery of which the most obvious examples are the improved staffs and corps and the divisional system. While the culminating battle of the Napoleonic wars, Waterloo, was fought at a battlefield where 140,000 men and 400 guns were crammed into an area of roughly 3,5 miles, the latter half of the 19th century becomes characterised by the dispersal and implosion of the battlefield. As Bousquet has directed our attention to in his work, after the birth of modern warfare the battlefield dissolves due to the increased range of weapons systems. Its disappearance is also facilitated by how the military logistics of perception conditions the appearances of targets, particularly through how the “eye of war” manages to move from the commander occupying a high-point next to the field of battle, to being facilitated by balloons, binoculars, aerial reconnaissance, satellites, algorithms, and cloud computing. It is as part of this process we eventually reach the contemporary era where targeting is characterised by polar inertia, as targets arrive as digital images from anywhere on the globe in front of a stationary targeteer. However, I would like to argue that, parallel to this, there is a corresponding process taking place, which erases and remodels the battlefield as a result of the military disposition that is born with the operational dimension of warfare. To grasp this disposition and its consequences we need to ponder the fact that it is no coincidence that the operational dimension emerges at precisely the time when the traditional battlefield is starting to disappear. As The Eye of War outlines, global targeting is enabled by a logistics of perception. However, the demand for maps and images as well as the attempts to make sense of the battlefield arguably receives its impetus and frame of reference from elsewhere. It finds its nexus in standard operating procedures, regulations, instructions and manuals, military working groups, administrative ideals, organisational routines, and bureaucratic rituals. And, as the battlefield is managed, coded, and homogenised, it simultaneously starts to become an external point of reference, enacted through operational analysis and planning far from the battlefield itself. Let us not forget here that “to analyse” literally means “to dissolve”, as the perception of the operational analyst subsumes the field of battle into compartmentalised objects and relations. Moreover, as Carl von Clausewitz reminds us, operational planning is necessarily a reductive enterprise.[2] That is, it subtracts from the world, when reducing this said world to a theater of war. We may therefore say that the battlefield receives its force of reality through operational analysis and planning and appears as an “alienated” entity dominated by range, trajectories and a territory coded through a military grammar. Nevertheless, it seems that when the battlefield reappears as a concept or scenario, that is, as a model, it also starts to vanish. Therefore, it is arguably in the development of operational models of warfare: the doctrinal handbooks, the logistical apparatus, and the staff meetings on what to target, we find a corresponding erasure of the battlefield. If we return to the introductory quote, particularly to the insistence that the real world begins with the invention of an Archimedean point outside the world, we may say that it is with the introduction of the operational level of war that military practice and theory find and substantiate its own external point of reference. It finds it at the start of the Napoleonic wars, in the introduction of an operational military machinery which gradually starts to think warfare independently of the army in the field. It substantiates it through a code that strives to make war an efficient and integrated version of its own programmatic execution. This code outlines how to arrange and rearrange, compose, coordinate, and manufacture targets and effects. It also works as a method through the tasking and employment of tactical units, the translation of rules and diagrams into select weapon systems, and the integration of protocols into a concentration of force, making fires and bomb drops preplanned responses to problem situations. In the final chapter of The Eye of War we encounter a battlefield that is spatially and temporally boundless, what the author calls a “Global Imperium of Targeting”. What relationship between targeteer and target characterises this limitless battlefield? I will end by briefly introducing two alienating reference points that I have discussed elsewhere: the operational environment and the battle-rhythm as examples of a military modelling of space and time. According to the military imaginary, the operational environment consists of:’the composite of the conditions, circumstances, and influences that affect the employment of military capabilities’ (see military doctrine). This term imposes a set of spatial relations that are conditioned through military concepts and functions: logistical routes and lines of communication, the range of weapon-platforms, perceived centres of gravity, the margining of targets, their weaponeering, and so forth. This spatial concept transmits relations through reductive doctrinal denominators such as “target-sets”, “undesirable systems” or “future end-states,” often visualised through PowerPoints. Corresponding to the remits of the operational environment, the’battle rhythm’ is the’combination of procedures, processes, and actions which facilitates extended continuous operations’. It is synchronised zulu-time: a coordinated 24 hour universal clock time enabling warfare to endure in real-time and coordinate fires and manoeuvres into tactical effects. The battle-rhythm is anticipatory, relating to ideas of dynamic actions, particularly in so called dynamic targeting. But it is also pre-planned as it forecasts and codes future time to shape its unfolding and becoming in accordance with the preparation and execution of warfare. So, as the traditional battlefield and its conceptualisation and contestation by crossbowmen and arquebusiers alike disappears due to the operationalisation of a martial gaze, what reappears is an abstract model of military space/time. This model perceives of the battlefield as that which facilitates military capabilities as extended operations as it targets for action. This means, I think, that in the Global Imperium of Targeting that The Eye of War portrays, the soldiers embodying the martial gaze assumes the roles of managers over our world as if it were this abstract and homogenous space/time. This points to a world that is indeed, a’battlespace in potentia’ watched over by’glacially indifferent machines’, as the author so eloquently puts it. However, it also points to the role of the military imaginary which oversees this gaze and which refines the modelling of space and time to impose a point of view on that which it sees. In short, the traditional battlefield may be dead, but we continue to live under the eye of its operational model.  
The role of the ballot is to determine the productivity of the 1AC within debate ie they need to prove that there is a connection between their scholarship and the ballot – if not you vote negative on production

#### 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**.

#### 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.

neither that of one party nor of another. It traverses all discourses without them wanting it to.

#### 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 War

#### China says no they will exploit the resources – official Chinese declaration

Xinhua News 19 (Chinese government controlled media, 5-17,  Chinese deep space research leads to deeper international cooperation, <http://www.xinhuanet.com/english/2019-05/07/c_138040362.htm>, accessed 8/13/19, jmg)

Chinese space experts have strengthened international exchanges in the latest achievements in exploring the moon, Mars, Jupiter, asteroids and the deeper cosmos. While developing the Chang'e-5 and Chang'e-6 lunar probes and China's first Mars probe, China Academy of Space Technology (CAST) is also pushing forward space programs such as the planned unmanned lunar research station, and probing asteroids, Mars, the Jovian system and the edge of the solar system, as well as interplanetary exploration, said experts from CAST. They were speaking to more than 370 experts from both at home and abroad in Beijing at a recent international symposium on lunar and deep space exploration. Deng Zongquan, an academician of the Chinese Academy of Engineering and a professor with the Harbin Institute of Technology, introduced many creative ideas at the symposium on designing future probes and rovers for exploring the moon and Mars. The design of the future lunar and Mars rovers could be different from the six-wheeled lunar rovers, Yutu and Yutu-2, already sent onto the moon, Deng said. Four-wheeled and eight-wheeled rovers also have advantages. For instance, the eight-wheeled rover could have a better carrying capacity and be used in building lunar scientific research station, Deng said. Chinese experts are also developing drilling technology and research on ice detection methods on the moon, he said. China recently unveiled its plan to explore an asteroid and a comet, inviting scientists around the world to participate. The mission will involve exploring a near-Earth asteroid, named 2016HO3, and a main-belt comet, named 133P, according to the China National Space Administration. Huang Jiangchuan, a researcher from CAST and chief designer of China's Chang'e-2 probe, said China's first asteroid probe is expected to be launched before 2025. He said the scientific objective of the exploration includes studying the formulation and evolution of the solar system, the role of near-Earth asteroid and main-belt comet impacts on the origin of life, and the solar system small bodies dynamics formation. The target 2016HO3 has a very close relationship with Earth and is called as a "mini moon" or a quasi satellite of the earth, said Huang. "Where is it from? What's its relationship with the earth and moon? Those are questions we want to know," he said. The second detection target of the mission, the comet 133P, probably contains water based on observation on Earth, and the exploration will help study its volatilization mechanism. "We are facing great technological challenges in exploring asteroids and comets due to the little understanding about their detailed features and high uncertainty," he added. "Compared with Japan, Europe and the United States, China is a latecomer in the exploration of asteroids and comets. We need to go faster, and we hope the mission will have multiple goals and can satisfy scientists' curiosity," said Huang. Over the past few years, CAST has been working on the mission design, and key technologies of asteroid exploration through self-funded projects, Huang said. "Due to the technology complexity, vast investment and high risks, CAST is willing to cooperate with other institutes in various ways and jointly conduct international deep space exploration for the benefit of humanity," said Huang. "There are so many small bodies like asteroids and comets in space, but only a few have been detected. The exploration could help us prevent threat from them to the earth, as well as exploit their resources," Huang said. Athena Coustenis, an astrophysicist from the Paris Observatory, said at the symposium that European scientists have a strong interest in collaborating with China on the asteroid exploration mission.

#### Interpretation: The affirmative should not be able to fiat that every state, company, and individual follows the laws of the plan Violation: They do – the affirmative makes it so not only does every country sign the OST, but also that zero countries proceed to break the rules later Standards:

#### Real World – we have evidence about specific scenarios in which countries have announced that they will continue to mine – that takes out all of their offense about being able to create tiny “x country says no scenarios”

#### Negative Ground – we lose any and all scenarios in which some country can’t or won’t follow on because the affirmative says the three words “normal means solves” and gets out of the solvency deficit

#### They will say that it is unfair – no it’s not. If the negative says that a non-space fairing country like Indonesia says no, you still vote affirmative because they can solve their impacts – our argument is contextualized to some of the larger countries and their evidence also supports that those countries test the water

#### Normal means has some countries not totally comply and still try to mine in space – it is the affirmative’s role to figure out what the punishment for those actions are

#### Their Jamasmie ev is in the context of the space force escalating tensions which means if they’re right you vote negative on presumption because they can’t solve. Stockdale GS reads blue

1AC Jamasmie 21 Cecilia Jamasmie [Cecilia has covered mining for more than a decade. She is particularly interested in Corporate Social Responsibility (CSR), Diamonds and Latin America. Cecilia has been interviewed by BBC News and CBC among others and has been a guest speaker at mining conventions, including MINExpo 2016 and the World’s Copper Conference 2018. She is also member of the expert panel on Social License to Operate (SLO) at the European project MIREU (Mining and Metallurgic Regions EU). She holds a Master of Journalism from the University of British Columbia, and is based in Nova Scotia.], 2-2-2021, "Experts warn of brewing space mining war among US, China and Russia," MINING, <https://www.mining.com/experts-warn-of-brewing-space-mining-war-among-us-china-and-russia/> DD AG

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

### Collisions

#### The advantage bites into the **Öberg link – their conceptualization of warfare because imaging satellites gets destroyed is what Öberg is talking about when he describes the necessity and the role of schematics within the battlefield ie that warfare is no longer fought with normal arms, it’s fought with scientists – like the movie War Games.** 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.

#### Their ev is about NASA’s programs – not private mining.

#### The inevitability of the Kessler syndrome reveals that this debate is only a question of whether we reinvest in the future that is already arriving or take the more radical bet on a new relation with technics.

**Reno 2018** (Joshua Ozias Reno, Associate Professor of Anthropology at Binghamton University. PhD from the University of Michigan, “Making Time with Amateur Astronomers and Orbital Space Debris: Attunement and the Matter of Temporality” in *Journal of Contemporary Archaeology* 5.1 (2018) 4–18)DR 19

For one thing, space debris is potentially dangerous to spacecraft. Space debris is partly assessed by treating returning spacecraft in a way they were never intended for: as a “hypervelocity impact capture medium”, as they are dented more by artificial objects than natural meteorites (Bernhard et al. 1997). The impetus for tracking and modeling space debris thus comes from the temporal possibilities they threaten. Alice Gorman (2015) describes space debris as an emergent assemblage that takes on new spatio-temporal properties, even when compared with other objects orbiting the Earth. This is most clearly represented in the idea of the Kessler Syndrome (Kessler and Cour-Palais 1978). This theory predicts a “cascade of random collisions that create so much debris the Earth is enveloped and cut off from space” (Gorman 2015, 42). This includes **a feedback process whereby objects continually collide and spread out**, **converting Earth orbits**, especially in LEO, **into** **a hazardous environment filled with tiny fragments**. Space debris would circle eternally overhead like a cloud of bullets awaiting a target, trapping us in fear on the surface. Gorman points out that it is unclear that such a dire situation has emerged or necessarily will. Whether it is likely to take hold or not, the Kessler Syndrome actually reflects anxiety about the unexpected and emergent spacetime of materials orbiting the Earth. The time they threaten is increasingly incorporated into fantasies of space travel. For example, this provided an element of horror in the recent and very successful science-fiction film Gravity (2013), where space debris was depicted as a monstrous threat – like a swarm of abiotic locusts – that cycled the Earth with an alien regularity: without warning they descend and annihilate spacecraft or slaughter hapless astronauts. It may be that these risks are being somewhat amplified by filmmakers and space agencies; yet, the threat of damage from orbital space debris is at least somewhat real. The ISS had to perform approximately eight evasive maneuvers during its first decade of operation in order to avoid collisions with debris. Calculations are normally performed at least three times a day to determine risks of collision over the subsequent 72 hours; if the chance of collision with a large enough object is determined to be greater than one in ten thousand, then maneuvers are planned and executed (see Johnson and Klinkrad 2009). Here is an account of a recent incident, written by representatives from the ESA and NASA assigned to space debris: The last collision avoidance maneuver by ISS occurred on 27 August 2008 when a fragment from the Kosmos 2421 spacecraft was projected to pose a collision risk of 1 in 72, i.e., 0.014 […]. This piece of debris was one of more than 500 cataloged debris released from Kosmos 2421 during three major fragmentation events from March to June 2008. At the time of these fragmentations, Kosmos 2421 was only about 60 km above the orbit of the ISS. As these debris decayed down through the ISS orbit, the number of potentially threatening conjunctions each month increased by a factor of three. (Johnson and Klinkrad 2009, 5) Occasionally, these objects also fall from the sky, as occurred in December of 2016 when a large object came seemingly out of nowhere and smashed a man’s van in Milwaukee, Wisconsin (Lemoine 2016). Wisconsin is also where a fragment of Sputnik 4 crashed down from the sky in 1962. The occasion is still celebrated in one town as “Sputnikfest”, including a pageant to determine the annual “Miss Space Debris” (David 2013). According to Dickens and Ormrod (2007, 153), space debris **is arguably even more meaningful as both** barrier **and bridge to desirable futures**. **These hoped-for futures involve**, for instance, further **exploration and exploitation beyond LEO** and **into the very valuable and legally contested domain of geostationary orbit**, **where satellites can more easily analyze** from and transmit data to the entire planet (Collis 2009). This also includes NewSpace initiatives that seek to extend capitalism and empire beyond the limits of the Earth, whether to mine asteroids or colonize Mars (Dickens and Ormrod 2007; Dickens 2009). **These initiatives** provide a clear motivation to clean up the polluted and risk-filled environment in the vicinity of Earth. From this admittedly interested perspective, the presence of space debris limits the utilization of LEO, MEO and GEO, **creating risks for** any state and/or capital investment. Insofar as space debris influences assessments concerning the utilization of outer space for various ends, it directly mediates the futures that space agencies and industries imagine **possible** and **desirable**. To manage these risks requires attunement. Space agencies must first be able to find the objects and predict their strange movements. As with contract archaeologists, experts are called upon to manage those materials that might otherwise interfere with the success of productive enterprises of extraction, construction and consumption. The primary difference is that, where contract archaeology, and cultural resource management generally, endeavor to protect the objects they curate from destruction by human industry, in astronomical CRM the risks are reversed: it is those voyaging into space who potentially have something to fear from leftover remains, and not the other way around. As Gorman makes clear, the primary difficulty with an archaeological analysis of space debris is the issue of distance and a lack of “direct field experience” (Gorman 2015, 33). Remote sensing can only provide fragmentary glimpses of objects large enough to capture. In short, the objects are too small and space is too big. In this regard, archaeology becomes much like astronomy. Amateur astronomers could be seen as ideally positioned to aid in such research, in fact, as they can cover more of the spacescape than even a very large centralized government telescope (Marshall et al. 2015). Beginning after the launch of Sputnik 1, amateur citizen scientists known as “Moonwatchers” (named after Operation Moonwatch, a Smithsonian project), helped form a global network of satellite trackers who provided crucial information to space agencies and governments throughout the Cold War (see McCray 2008). Given the secrecy that has surrounded a great many satellites, furthermore, such efforts arguably also help to democratize scientific knowledge. A more recent example is the crowd-sourced effort to scan space in search of the elusive and acclaimed Planet 9. And, perhaps more importantly, amateur astronomers have developed the patience to undertake this, having had to routinely undergo attunement to multiple temporal constraints in order to follow their passion. It therefore is not surprising that in 2012, DARPA (Defense Advanced Research Projects Agency, the US Department of Defense’s projects agency created after Sputnik 1 launched) proposed to enroll amateur astronomers in their hunt for space debris. The goal, they claimed, was to supplement the DoD’s Space Surveillance Network with a new program called SpaceView. Astronomers would help DARPA track the debris so that they could launch a satellite recycling robot, called the Phoenix; initially, it was hoped that this would be ready by 2017, although it is still in development. The Phoenix would find the debris identified by astronomers and use the parts to support new space missions. The European Space Agency and NASA have announced a similar goal, without any mention of the use of amateur astronomers. The appeal of recycling space debris is that it turns the threat into a resource that can make up for the enormous terrestrial funds and resources that are needed to launch objects into Earth’s orbit and beyond. With the help of amateur astronomers, space debris would not only be a form of cultural resource to manage – as it is typically imagined within the archaeology of outer space – **but a material foundation for new and emergent futures.** Precisely because amateur astronomers are used to undergoing attunement to terrestrial and cosmic temporalities, however, they may not answer the call. Those astronomers that I have met are skeptical of DARPA’s plans (which, like many proposals to capture and clean up the orbital environments of Earth, have yet to materialize). Amateur astronomers are too aware of the trials undergone to peer through the media of sky and space, the time it would take to find something small and unexpected. Perhaps more importantly, this is free labor that they would rather use for more satisfactory ends. Space debris, after all, is usually thought of as noise that disrupts their careful efforts at observation. Conclusion There is a sense in which both astronomical and archaeological practice share a peculiar temporal multiplicity or polychronicity. They are both material practices directed at traces in the present, about things in the past, for the sake of the future. That is, no matter what form they take, their true object is not the actual rays of light or fragments of material they have access to in the present, but the past reality these stand for and enable us to better imagine (whether distant celestial objects or human societies as they once were). And no matter whether the goal of what they do is preserving a memory or engaging in positive social change, they are striving toward a hoped-for future where the memory lasts and/or people are better off (cf. McGuire 2008). I have argued that amateur astronomy in general, and the observation of space debris in particular, demonstrate how materials can do more than stand for time’s passing, but also produce a temporality all their own, with which one can become more or less attuned. This raises the question of whether such time is uniform or multiple. Adam (1995, 1998) and Connolly (2013) both argue that the universe consists of multiple, nested and semi-autonomous temporalities. Similarly, the heirs of Einsteinian relativity in contemporary astronomy have developed not one master clock but a “family of time scales” which include Universal Time, International Atomic Time, Coordinate Universal Time and “apparent time”, among others (Seidelmann and Seago 2011). By contrast, Ingold and Hallam (2007) and Ingold (2012, 2014) usefully direct our attention to the role of the nonhuman as productive of temporality. However, according to Georgina Born, they rely on a “monotemporality of becoming” that fails to acknowledge “the plural temporalities in operation both in human and nonhuman life and in cultural production” (Born 2015, 365). Based on the experiences of amateur astronomers and the phenomenon of orbital space debris, one could argue not only that materials are time, but that these times are multiple, nested and emergent. The tendency in the growing archaeology of outer space has been to look at documented evidence from the vantage point of the ground – but, unlike amateur astronomers, not through telescopes. This does not make the evidence they have gathered less important, but it does mean that the material practices involved, of observing and becoming attuned, is different. The archaeological curation of objects in outer space not only consists of a new form of cultural resource management or heritage research, although it is that as well (see Barclay and Brooks 2009; Idziak 2013). Rather than helping us merely to record the past, it may, as Gorman (2014, 2015) argues, help us understand the emergence of new temporalities. In particular, she associates observation of outer space with the Anthropocene, which “cannot be understood without reference to space. **The Sun**, **Moon**, and **electromagnetic environment shape and drive the climate of the Earth**” (Gorman 2014, 90). To reckon with such unsettling temporal possibilities, one need only turn to astronomical practice, which has long facilitated new ways of imagining the universe’s ultimate beginnings and endings… from the Big Bang and Big Crunch, to the Milky Way’s eventual collision with the Andromeda Galaxy, and the inevitable incineration of the Earth as it is engulfed by our aging Sun, which itself will eventually die. If anything, **astronomers must be open to many futures**, **many endings**. The difference between these disastrous, imagined futures **and** those associated with space debris is that, by limiting the exploitation of orbital regions and the exploration of the universe, space debris serves as a temporal blockage of sorts – one that not only frustrates us in the present but delays or eliminates possibilities, including the possibility of future escape from the climatic and climactic disasters that await a humanity that may be prevented from ever safely leaving Earth behind. Perhaps space debris can never be mastered and will only multiply. If so, it would have to be attuned to as yet another constraining nonhuman force, mediating access to desired and hoped-for views of, and futures in, space. One might assume that the main limitation confronting the archaeology of outer-space exploration is the lack of access to the remains floating in orbit or crashing into the earth. Archaeologists of outer space have developed novel ways to study what they rarely can grasp and handle, measure and collect, but amateur astronomers have far more experience, being passionate about things to which they have no direct access. I have no reason to endorse DARPA’s view, that amateur astronomers are interested or able to provide new data, per se. What I think they represent, instead, is an alternative sensibility, one cultivated over many generations, **whereby knowledge practices are undergone rather than mastered.** This is true not only of amateurs, those I have focused on, but of professionals as well. Exoplanet astronomers, for instance, are tasked with imagining worlds from the slightest glimpse of planets many light-years away (Messeri 2016). Not only do archeologists of space debris have a closer target, in space and in time: they also know much more about the world from which these metal pests emerged. If they became more familiar with an astronomical sensibility, one **premised on distance and attunement**, restraint and constraint, they might discover a set of practices that has grown in the absence of such relative mastery, subject to processes of formation and deformation not unlike what conventional archaeologists encounter amid the Earth’s beguiling surface.