# OFF

#### Our eager gravitation towards space makes us equally distance ourselves from the problems on earth. A global commons is just a fancy way of mirroring how space is now. It doesn’t have one owner but all of its collective owners are billionaire elites for government projects. This proves that they serve as a form of white idealized policy while simultaneously using that as proof that they’ve done enough. Their plan text is just further proof that we cannot use space whatsoever until the alt has occurred since they concede that companies can still rent it out. This answers their “using the state good stuff” in the underview bc it proves how they will always find ways to insidiously maintain their prospects in space.

Dickens and Ormrod 7 (Peter Dickens, Lecturer in the Faculty of Social and Political Sciences at the University of Cambridge and Visiting Professor of Sociology, University of Essex, and James S. Ormrod, Lecturer in Sociology at the University of Brighton, “Cosmic Society: Towards a sociology of the Universe,” Routledge) KVA

. Hegemony and science fiction Some commentators on science fiction have also argued that the stories told there about human exploration and settlement of space are distinctly hegemonic. Yet it should also be noted that there are those who emphasize the way in which science fiction explores the conflicts of Western society, and highlights the problems with imperialism and capitalism. Some science fiction clearly goes even further with narratives that attack the legitimacy of contemporary social relations through telling dystopian stories about how a human future in space might look. Kim Stanley Robinson’s (1993, 1994, 1996) trilogy of books on a Martian mining colony explore the ethics of exporting capitalism to the rest of the cosmos, for example. In the trilogy, groups of Martian settlers break away from the capitalist mining operations to establish their own social order based on socialist, environmentalist and even nudist principle**s**. As such, there is probably some truth to DeWitt Douglas Kilgore’s assessment of the scope of science fiction and science writing about space (what he calls ‘astrofuturism’): Astrofuturist speculation on space-based exploration, exploitation, and colonization is capacious enough to contain imperialist, capitalist ambitions and utopian, socialist hopes. [. . .] This [speculative] impulse has produced a strand of futurist thought that seeks an eternal extension of contemporary political and economic arrangements, albeit stripped of unpleasant resonances and rendered innocent. However, astrofuturism also carries within it an idealism, a liberal or utopian commitment that seeks alternatives and solutions to these problems and conflicts characterizing contemporary American life. It can imagine space frontiers predicated on experimental arrangements and the production of relationships uncommon or unknown in the old world. (Kilgore 2003: 1, 4) However, it is hard to deny that science fiction, and especially popular science fiction, is often supportive of existing social practices. The futures imagined by most science fiction writers reflect a hegemonic worldview simply through their demonstrated inability to imagine anything other than an extension of contemporary social relations. This is a point made eloquently by Sardar and Cubbitt: Science fiction shows us not the plasticity but the paucity of the human imagination that has become quagmired in the scientist industrial technological, cultural-socio-psycho babble of a single civilizational paradigm. Science fiction is the fiction of mortgaged futures. (Sardar and Cubbitt 2002: 1) Sardar and Cubbitt, like Kilgore, retreat from this altogether critical position to discuss the ways in which science fiction can play out the conundrums of civilization. However, some writers influenced by the critical theory of the Frankfurt School have been much more outspoken against the duping effect that science fiction has on an audience that is encouraged to accept social relations as inevitable through witnessing them projected in time and space. Goulding (1985) has argued that science fiction shows like Star Trek ‘preserve a “halo of free choice” within rigid rules and structured inequalities’. The Federation to which the Enterprise belongs promulgates male authority (preserved through the notion of the chain of command), capitalism (through military and diplomatic protection of mining colonies), possessive individualism and the ‘Darwinian ethic’ of the survival of the fittest. As Goulding argues, the narratives of the show are stories about the crew of the Enterprise teaching the various space colonies which they visit to be American. In one episode, he reports, the crew are disturbed upon visiting a planet on which people worked the minimum amount of time possible and spent all their free time high on drugs. This obvious transgression against the protestant ethic had to be redressed by the Enterprise crew. Our imagination as regards possible human futures in space is the product of hegemonic relations. Not only is the imagined spacefaring civilization one that continues to operate on neo-liberal principles, but, more importantly, alternative Earthly solutions to our social and environmental problems are ignored entirely in favour of exporting them to space. Whether or not the readers of science fiction have the ability to critically dissect the messages of the shows they watch and the books they read has been hotly debated. Goulding’s position has been attacked by writers like Jenkins (Jenkins 1992; Tulloch and Jenkins 1995), who has argued that the science fiction audience is highly creative and reflexive. If this is so, there is clearly some hope that critical science fiction writing and the critical reading of science fiction can contribute to the exploration of alterative futures to the extension of global capitalism into space, but this requires engagement in praxis. Hegemony, outer space and public opinion Sadly, at the moment, there is little indication amongst the general public that this engagement in praxis is occurring. We asked the MO writers an open-ended question about their thoughts on, first, humans living in outer space and, second, private companies mining asteroids for resources. The first thing to be noted is that the majority of respondents expressed no strong feelings about the desirability of these enterprises. Instead, in a number of ways, they discussed the practicality and likelihood of these possibilities. Amongst these people there was a fairly even split between those who considered it impossible, highly unlikely or so distant so as to be not worth discussing, and those who considered it necessary or inevitable. Those who dismissed the practicality of the idea mentioned such things as the ability of the body to survive in space, the insufficient quantities of valuable materials, and the cost of extracting them. It has been suggested that such pragmatism has replaced traditional political ideologies (see Lyotard 1984). There were also a few who chose only to comment on the likely discomfort and boredom of life in space, without expanding further. Those that saw these developments as inevitable held equally depoliticized views. One said simply, ‘the question implies that there could be some objection to this, but I cannot see why’ [B1475]. For many, these ideas are natural common sense (or, rather, hegemonic) solutions to the problems of overcrowding, pollution and resource deficiency on Earth, and in some cases even global warming or nuclear destruction. One man said simply, ‘I think it is an essential idea as the way we are leading our lives at the moment means that our planet’s resources won’t last forever’ [B3133]. This un-reflexive acceptance of space development as a solution to Earth’s problems is translated into a more positive ideology by pro-space advocates. Furthermore, it was even assumed by some writers that space settlement and private exploitation of resources would naturally go together [B1654]. Even though this was not seen as an altogether positive development, it was seen as an inevitability: ‘The truth of it is that most people on this planet live in societies based on private enterprise and military strength, and there is nothing about space to convince us to change once we go there’ [H3070]. The idea of society expanding into space complete with all the contradictions of our existence on this planet is, for this group at least, a largely unquestioned form of ‘common sense’. We return to this in Chapter 6. Capitalism, outer space and resistance Resistances to military enterprises and to what Harvey calls ‘accumulation by dispossession’ may well be multiple, however. Social movements like the Global Network could mount such ethical opposition to the humanization of space that investment might, for a while at least, be halted. They have been outspoken against the militarization of space, but also against the use of nuclear power in space, and have flagged up issues including the creation of space debris and the socio-environmental consequences of opening up space to capital. There is evidence that this movement is gaining in numbers and becoming increasingly militant. The links they have built with other organizations associated with the political left, such as the Yorkshire CND in England, demonstrate the awareness that activists have that issues about outer space are the result and continuation of the dynamic of a global neo-liberal capitalist economy. As mentioned above, third world governments have also contested, albeit to date unsuccessfully, the monopoly that the Western world is developing over outer space. The United Nations’ role in dictating the shape of the humanization of space looks to become increasingly central, though it remains to be seen whether the US influence will continue to dominate proceedings in an era in which blocs of power in other countries such as China and India emerge as major stakeholders in outer space. There is always the danger, however, that these resistances will be blown out of the water by those social alliances attempting to retain power. Culture and the media have a key role to play in dulling or awakening popular consciousness about these issues. As we have already argued, there is a danger that space technology itself disseminates a hegemonic worldview that legitimizes as inevitable the endless expansion of imperial capitalism into space. Organic intellectuals within popular culture and activist organizations will certainly have a key role to play if this is to be resisted.

#### I’ll now play a clip from Gil Scott-Heron’s poem: Whitey On the Moon.

#### (clip 0:30-1:00)[[1]](#footnote-1)

#### The alt is an act of defanging the prospects of space, which shifts 100% of our attention away from Space and onto Earth, which recognizes for every utopia we create in space, we create another dystopia back on Earth.

Cornum 18 (Lou Cornum, They now live in Brooklyn and study Black and Indigenous science fiction at the CUNY Graduate Center, “Event Horizon: Thinking about space demands new ways of thinking about humanity” *Real Life Magazine*, March 12, 2018)

The face that launched a thousand spaceships was the face of the earth. The 1969 televised image of Earth as seen from Apollo 11 was a solidifying moment of national theater as Americans with television sets gathered around to confront and experience the possibilities of their country’s expansion. More than the lunar footprint, the eye of memory looks back toward a vision of Earth. From that first image on, the delicately suspended globe was supposed to be a lasting revelation — the “pale blue dot” that Carl Sagan described in the images of Earth taken by the Voyager 1 spacecraft in 1990. Sagan referred to Earth as such to illuminate the minor position of humans in the universe, to belittle the reckless folly of anything humans deign to call achievement or advancement. There is an unnoted irony in that the scientists who gather at the Carl Sagan Center, home to the Search for Extraterrestrial Intelligence Institute (SETI), claim to be “conducting the most profound search in human history.” What Sagan spoke of could suggest a reordering of human hubris into a way to live as a species oriented toward mutually sustaining vulnerable life. The SETI Institute, in line with most contemporary interests in outer space, has chosen instead grand proclamations of discovery for the future of all-too-human humanity. The fragile, quivering mass of Earth is not in such concentrated focus as it was when those images from space first came to us. Cosmic scenes that captivate and circulate online are high-definition, high-quality images of very, very far away, usually made available directly from NASA. On Twitter, you could follow the last moments of the great content creator Cassini, which sent back pics from its journey to the outer limits and then was thrown onto the surface of Saturn. One of my favorite accounts sends out close-up images of Martian textures, @BitsofMars. But on other accounts, in other stories, we see half the earth burning, another part drowning. When we avert our gaze to outer space, it is all color-corrected wonder, blissfully bereft of context or history. As global disaster spreads and becomes more widely visible, missions to take humans to space become more prevalent, more appealing. Every time an exoplanet with a certain biological signature is noted, there’s a brief spike in press rekindling the idea that people might be able to start anew somewhere else. How many times a year do we see and perhaps circulate a story of some newly discovered Earth-like exoplanet? It’s not just the drive of wonder. It’s the panic. The panic of sitting on a world on fire, yes, but also the panic to make a profit. This is speculation; there is a return. There’s always a newer world waiting. In 1893, Frederick Turner announced the frontier of the American West closed. This suture in the flow of national expansion would be an originary wound for American democracy in its rugged rite of passage. Turner of course was wrong, as many historians have contended for decades. The frontier never closes. Not in California, not in the 19th century. If it isn’t the West, it’s the moon, then cyberspace, then Mars. The frontiers do not close but rather lap over each other like waves where people and capital crash and flow. It seems cliché that the tech and space industries would be located primarily in the West. Silicon Valley could only ever have been in California, just as Spaceport America seemed manifestly destined for location outside the town Truth or Consequences, New Mexico. These Western territories have been continuously opened up for further privatization and expansion in world-warping acts of violence made invisible by the making of a supposedly better new world. It is not only that capitalism and colonialism need new spaces to expropriate; these processes also always require a future on which to speculate. At the precipice of one receding frontier, they find another one to ride. The word pioneer, usually attached to innovation, is never too far from people like Jeff Bezos or Elon Musk or Peter Thiel. These men’s careers in tech startups, their origins in the digital commerce boom, and their pioneer identities were forged on the electronic frontier. Like pioneers of industry in the colonial expansion of the Americas, these men operate on the knife’s edge of sovereignty as it cuts a path for both state and capital to consolidate power. In space, these men see a chance to loosen further the bonds that still restrain the endless capital they’ve been chasing in their imagined rocket ships. Investors, architects of the financial and material future, have taken to using the term “NewSpace” to refer to the almost accessible ventures of asteroid mining, space shipping, spaceship travel, and other forms of space commerce. Still, there are minor contractual obstacles. Even at the void’s edge, there is a treaty. A couple of treaties actually. Out there the governments still rely on these dusty remnants of the dying beast of nation-state sovereignty and the apparatuses of international relations first created to aid and abet the global distribution of white men’s control. The Outer Space Treaty of 1967, which has a more precise formal name — Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies — may seem surprisingly benevolent. It is sometimes summarized as saying that nobody can own space. But while it outlaws national appropriation, it allows incorporation without the state. In a demotion from the sensual feel of its phrasing, “celestial bodies” become the body politic, managed sites of bans and requirements. While the U.S. did sign the Outer Space Treaty of 1967, it did not sign the 1979 Moon Treaty, more formally known as the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies. The Moon Treaty, among other directives, bans any state from claiming sovereignty over any territory of celestial bodies; bans any ownership of any extraterrestrial property by any organization or person, unless that organization is international and governmental; and requires an international regime be set up to ensure safe and orderly development and management of the resources and sharing of the benefits from them. It also bans military activity such as weapons testing or the founding of extraterrestrial military bases (though it’s hard to see U.S. presence anywhere in the stars or on Earth as anything other than militaristic). Evoking the common heritage of “mankind,” the Moon Treaty could appear a pie-in-the-sky attempt at more equitable relations to land than have been established on Earth since the advent of private property and national borders. But it is of course expressed only in the stop-gap measure of treaties that assign power to states, governments, and resource-management regimes. The power of the treaty is in its possible revoking. In making the decision to sign the treaty or not sign the treaty, the collectives state their unquestioned right to make decisions in space at all. Space is a place where old and new sovereignties, like asteroids desired for mining, are colliding or sometimes colluding. There is a line connecting the Dutch East India Company, the Hudson Bay Company, and SpaceX. These companies begin as corporate endeavors, but then as now the nation-state is sticky: It finds a way to adhere. Take the case of Luxembourg, a polity that lives on tax loopholes (allowing large corporations to move money in and out of the nation with utmost secrecy and minimal charges) where, as Atossa Araxia Abrahamian reports for the Guardian, private space companies are finding their funding allies for financed trips to the moon, Mars, and the interstellar spots for satellites. The mixing of business and research mixes the money and power hungering of technocrats who don’t just want to own businesses but want people to see their businesses as the shareholders of humanity’s future. In middle school we didn’t have model U.N., but we did have model Earth. For field trips we’d be taken away to Biosphere 2, a site for space-colonization experiments built by Space Biosphere Ventures but owned by Columbia University by the time I visited. In these field trips to the desert outside a town auspiciously named Oracle, we walked around the display vivarium, always being reminded to call it biosphere two — biosphere one was the earth outside, the one we had momentarily left behind and one day might leave behind for good. That old planet was a past prototype. But the new prototype was itself already a defunct research facility. The closed-system experiment with human subjects had failed twice in the ’90s, and it now rests as one of the many dreams littering the desert of a new world. When a world is new, it creates alongside a space held for the older worlds. This is the drama between what can be brought from before and what will be made anew. It is why Aeneas carried his dying father Anchises on his shoulders out of Troy on his way to found Rome. The traveler always brings baggage. Jeff Bezos would like to be the one who carries that baggage to space or controls the robots and poorly paid temporary laborers who accomplish the carrying. In this supposedly new space, the regimes of inequality will be quite familiar. The space-goers insist it is something called humanity, with the ingrained hierarchical legacies of this category, that will be going. Leaders in industry who have always wanted to be world leaders are now positioning themselves as leaders of outer worlds. Elon Musk makes union busting seem like a cosmic necessity for the continuation of human life. The material and subsequent cultural valorization of certain kinds of work in the tech industry, wherein the “great minds” make all the money and those who maintain the machinery of day-to-day existence are treated like the shit they’re supposed to take, does not end at the stratosphere. Even the more lofty moral considerations of outer-space ethics (e.g., is terraforming ever morally acceptable?) often ignore their fundamental basis in deathly processes still very much situated on Earth. Any outer-space endeavor today or in the near future will be an extension of the life-destroying capacities of capitalists and their colonial countries. On the Deep Space Industries page for asteroid mining, the exploitation and extraction of minerals is heralded as “an unlimited future for all mankind.” The endless extension of capitalist accumulation comes with an extension of this delusion of “all mankind.” As if all such projects, the project of humanity itself, has not always been an exclusionary one. SETI may appear to inhabit a different realm of speculation than that of the grandstanding services-and-commodities pioneers. But its project also follows a willful ignorance about human history and the exclusions that make humanity as a class possible. SETI proponents, much like Musk and his ilk, view themselves at the forefront of a new breakthrough not necessarily of capital but of knowledge. Their sites of expansion are not centered so much on the territories capital requires in order to enclose, privatize, and extract until depletion (though they can be intimately connected, as in the development of the university and research centers as global actors of dispossession), but on sites of encounter. Outer-space commerce and funded extraterrestrial contact-seekers operate on and reinforce damaging notions of land, life, and the future that actually hinder the survival of most Earth dwellers rather than provide anything like meaningful hope. Stories of contact are only ever understood as colonial stories. Every inquiry of future contact with extraterrestrial life, from academic and government-funded to amateur and whimsical, relies on the same stale comparisons of colonial conquest. Columbus, of course; Captain James Cook, often. Every episode of the podcast Making New Worlds: Why Are We Going? features historical authorities commenting on colonial situations of the past and comparing them to hypothetical situations with extraterrestrials. The topics convened by those who are granted the authority to speak on them are conducted under the tyranny of certain givens, the most persistent and damning of them being contact as conquest. Science fiction should allow us some way to bend around these frames, and occasionally, in the right hands, it does, though it more often does not. Donna Haraway, whose work takes on the tones of science fiction, sees the science-fiction tradition as a form of theorizing. She repeats across her different writings that “it matters what concepts we think to think other concepts with.” And while I do not take her up on thinking with the “chthulucene,” I do come to science fiction in a similar way, to think through the science and the fictions that constitute our realities. I want science fiction that doesn’t make heroes of pioneers, that leaves space open for other kinds of speculation. If the villains of my space saga operate on the understanding that there is always a newer world, how do we tell a different story? A different approach to the new, a different understanding of different. What we should be preparing for in outer space is not sameness on a different scale, the neatly reflected sides of an analogy, but refracted difference. What is the life in the search for extraterrestrial life? Astrobiologists, like those who study extreme forms of life in deserts like the Southwest in preparation for Martian ecosystems, are searching for the translatable other. Nathalie Cabrol from the SETI institute says that the question astrobiologists ask is the question of difference: How to approach a different type or version of life. Yet in movies like Arrival, I’m disappointed with the limits of alien imagination and the clichés about language and conquest. In the short story by Ted Chiang that Arrival is based on, “Story of Your Life,” the aliens are not large octopuses but heptapods whose radially symmetrical bodies are like seven-eyed barrels hovering “suspended at the intersection” of seven fluid-moving limbs. The most interesting thing about their description is that it is so hard to picture. Unfortunately, only two pages into the story, the linguist narrator draws on a made-up account of linguistic confusion between Captain Cook and Indigenous inhabitants of current-day Australia, making a seemingly necessary gesture to the anxiety that extraterrestrial intelligence will always inhabit the position of colonizer. The story is never different enough. We can’t always see difference differently enough. And yet there are times we get a glimpse of what that different difference might be. On scales from a parasitic romance to multi-generational future epic, Octavia Butler wrote out multiple worlds of a time after Earth as we know it, when human survival seems dependent on adapting to and becoming alien. The short story “Bloodchild” and the three-part trilogy Lilith’s Brood (which I will refer to hereafter by its original title, Xenogenesis, which is both more badass and more accurate) are texts about the transformations and exchanges that precipitate the post-human. Though these stories are far from utopic, Butler also emphasizes that the story of post-Earth humans would not be “the British Empire in space.” She envisions contact as a moment of exchange. In “Bloodchild” this is not without loss and unequal stances of power, but there is also love of a different kind between an insectoid and the host to whom she feeds subduing eggs. All this beautiful bug being asks in return for otherworldly hospitality is that her beloved open himself up to an implantation of eggs that, if not removed promptly through a torso-wide incision upon birth, will proceed to eat through his flesh. “Who knows what we humans have that others might be willing to take in trade for a livable space on a world not our own?” Land and life are the categories of thought that outer space can call us to interrogate, to repair not only by some future metric of what has never been done but also by what might have been possible had colonialism not happened as it did, if exploration and contact could have happened in another way. These are the what-ifs of a science fiction that turns away from the frontier to other spaces of transformation and invention. These are stories that do not call for a future for humanity but a time and people co-constituted according to different logics, those of interdependent collective living in the now. In Butler’s Xenogenesis series, the Oankali are a technologically superior race that also embody and enact what has previously been considered primitive on Earth. On their ship-world, for instance, they live across a different division of animate and inanimate in which the ship is capable of remarkable acts of generation and sustainability, not because of machine learning but because it is itself a living, reproducing creature-thing. The Oankali are the mouthpiece for Butler’s idea that humans have a social tendency to create hierarchies so entrenched in inequality and domination they result in mass war, and that this hierarchical tendency is genetic. It is with a similar cynicism that the narrator of Joanna Russ’ 1976 novel We Who Are About decides it is best to kill herself and her fellow crew members rather than try to continue human life on a crash-landed planet. While I love these texts and find myself often in their fatalism, I also see their potential to guide us to change before we are killed off by the will to death and domination practiced by those who have been in power for far too long. I see sequels to these works in which our species learns or relearns the need for different needs. In these other stories the alien is not the harbinger of doom but all the tense dynamic potential of the encounter. A face turned toward the landscapes of Arizona or New Mexico is always about to say, “It looks like Mars.” All that red rock and the surprisingly organic shapes the sandstone makes. The seeming inhospitality of the afternoon desert. It all signals the alien, but it is certainly not alien to the people who live in these landscapes. And yet Navajo filmmaker Nanobah Becker used footage of Monument Valley to represent Mars in her sci-fi short film The Sixth World. What is in part the cleverness of low-budget filmmaking is also an act of un-alienation that creates a sympathy between ancestral Navajo territory and a Navajo novum on Mars. In Becker’s film, indigeneity is not only defined by prior occupancy but, more important, by a set of practices that attune to difference but are not incapable of making a home in the alien. To go to outer space, rather than preserve humanity, we cannot stay human. Any critique of the human, including mine, is hugely indebted to black studies, a site that contends that the development of the figure of the human is inseparable from the racial orders that classify people as human, not quite human, and nonhuman wherein human is always proximity to whiteness and nonhuman is proximity to blackness. This is what Alexander Weheliye has argued in his book Habeas Viscus, drawing from black feminist critique to rouse all other minoritarian subjects to abandon our bids into the human project and refuse the calculus that grants others personhood always at the cost of further exclusion and violence against black people. The Jamaican philosopher, novelist, and playwright Sylvia Wynter has stated that one of the projects of black studies is an inquiry into and enactment of other ways of being a species, ways counter to the form of human that is taken to mean the Enlightenment’s rational man. This is a refutation of the idea of the human as a self-possessed sovereign being, defined by his ability to possess and improve property. When I think of how else humans could be, this means operating under different modes of production and different relations to land and being that are communist, nonhierarchical, and deeply pleasurable. Returning to the late ’60s and that first view of the world from outside, I consider the failure of vulnerable Earth’s image to enact planetary action against borders, war. But if the extra-industrialists have their sights and sites on the celestial bodies, and if this earth will soon be flooded and inflamed, those routinely exiled from the class of humanity that space exploration is in service of need our own space programs, and with it, a deprogramming of the human. Outer space gives us a place to socially, sensorially, think how we want to think. If the search for an “out there” does truly prompt a shift in consciousness, it should be one that helps us inhabit the present, to study together on biosphere one until we find another way of living that doesn’t leave so many dead. This is not a statement against outer space or exploration. What I want, what I need, is a space program for the people.

#### Treat Whiteys on the Moon as an existential threat—it negates non-white subjectivity, breeds cognitive bias in policy, and it spills up from psychic to material extermination—prioritizing “traditional” impacts is racial selection

Preston, 17 – John, Cass School of Education and Communities, University of East London, “Rethinking Existential Threats and Education,” *Competence Based Education and Training (CBET) and the End of Human Learning* pp 61-93

After Marxism, the second existential threat is one of negation and elimination of the subject and here I shall consider conceptions of this from CRT and black existentialism. Various contemporary educational theories consider the equity and social justice implications of different forms of education with regard to race. The work of Sleeter and Grant (2007) makes the ethical and pragmatic case for multicultural social justice as a key value of education. This has been followed in contemporary work that attempts to consider the various dimensions of social justice. For example, Bhopal and Shain (2014), consider the twin axis of recognition and redistribution as goals of education. Other work examines the role of social distancing from the ‘Other’ by white students as a dynamic process in which Black, Asian and Minority Ethnic (BAME) and working-class students are disadvantaged. In many ways denial of social justice in terms of lack of resources, recognition or access to social space can be considered to be a form of dehumanisation. However, whilst work on social justice and education might consider the lack of humanity in these systems of oppression (applying concepts such as ‘bare life’, Lewis 2006; or ‘othering’ Lebowitz 2016) they do not consider directly existential threats. Threats to humanity on the basis of difference may arise from totalitarianism as much as through war and threats to the environment. The various genocides which have taken place throughout human history have often had a racial, or ethnic, cleansing purpose to them. They have been eugenic threats that are based upon spurious ideas of genetic and moral superiority. Writers on race from Fanon to Du Bois have considered that the threat posed to racial groups may be existential and that there is a short step from psychic, to real extermination. The negation of individuals through economic, social and psychological processes allows for their physical extermination. Du Bois (2014) deals explicitly with existential threat in his short story ‘The Comet’ where humanity is almost wiped out by a threat from space, leaving only a small number of people to carry on. As one of the survivors of the comet is an African American, this leads Du Bois to consider the state of race relations in the USA. The implication of the story is that the existential threat of the comet (which allows the African American character to live in a world entirely free of racial prejudice) allows release from the existential threat of eugenic attitudes. Building on Du Bois, in other work (Preston 2012), I have considered the ways in which preparation for threats, including existential threats such as pandemics and nuclear war, has been in many ways eugenic in that it prioritises the survival of some more than others based upon criteria which include race and ethnicity (Preston 2012). Preparing for disasters and emergencies often prioritises the interests of white people above those of other ethnic minorities. One reason for this is tacit intentionality which means that policymakers and practitioners do not consider human diversity in considering how people may respond to disaster. Policy is often biased as policymakers expect that people will be ‘like me’ which (at least in the UK and USA) means they will often be white, middle-class, educated, English-speaking men. In planning for threats, there will be various ways in which such biases are included. For example, they may not consider publishing advice in a number of languages, the resources necessary to survive a disaster, the mobility of people and the attitudes of emergency responders. This is unwitting prejudice in that by not considering diversity they are actually making it less likely for BAME people to survive, or protect themselves against, the disaster. Although these biases may lead to a gradient in terms of survival by different groups in a disaster, they do not appear to relate to existential threat. However, existential threat can be interpreted in a different way in perspectives from critical whiteness studies and CRT. In critical whiteness studies, whiteness is taken to be not a racial identity, but rather a system of power and oppression (Leonardo 2009). Whiteness was created as an identity not simply as a mode of social classification but as a way of exploiting and controlling others. There are obviously periods in history where this was objectively the case. During slavery in the USA, for example, whiteness was used as a means to distinguish between those people who had the right to own property (whites) and those who could not (Africans), Moreover, whiteness was the obverse of property in that only Africans could ‘be’ assets or property. Enslaved Africans were therefore treated as property and did not have access to the basic rights which would constitute humanity in American society (such as access to education, the right to own property, the right to decide who they should have relationships with). There are obviously parallels between this experience and holocaust when Jewish people (and other individuals) were dehumanised by the Nazis and denied access to basic resources. During imperialism there was also a period whereby other races were categorised to be less worthy than white people and this provided the justification for colonial control, exploitation and often extermination. Advocates of whiteness studies go further than this and consider that whiteness is not merely a past system of oppression, but a continuing system of white supremacy (Leonardo 2009). The economy and society is comprised in such a way that white people will usually benefit, and BAME people will usually not. This is not only an economic and social system but also a psychological system whereby existence as a full human depends upon one’s racial categorisation. This idea has its roots in the work of Fanon (1986) who wrote that black identity was shaped by the white gaze, but also contemporary writers also consider the notion of whiteness as ‘death’, a categorisation that is rooted in past oppression and extermination, whose remnants exist to this day. This perspective on race and existence leads us to consider what is meant by life, and whether we are not currently living to our full potential (as Marxists would also propose) when existential threat is actually amongst us. For Marxists this would be the expansion of the ‘social universe’ of capitalism that flows between and through us, ‘capitalising humanity’. For critical whiteness studies, this existential threat would be one of whiteness and the negation of existence for a racially classified group of people. In order to make this idea of constant existential threat more tangible (although the term is not used) critical race theorists use what are known as ‘counter-stories’ to consider how racial dynamics might develop in the future, or to highlight inequalities in the present (Delgado 1996). Derrick Bell (1992) who is considered to be the founder of CRT, uses a much cited counter-story ‘The Space Traders’ to consider the ways in which black people’s lives are classed as being not equal to those of whites in the USA. In ‘The Space Traders’ a race of aliens offer the USA a trade: all of America’s black citizens in return for unlimited, environmentally friendly, energy and technology. After some debate, the American people vote on the proposal and decide to give up all of America’s black citizens to the space traders in return for the futuristic technical goods. Of course, Bell is proposing an analogy between slavery in the past and the present situation of black people in the USA, and perhaps even suggesting that such a thing might happen again. On another level, though, there is also the idea that the existence of black people in America is categorised at a different level of metaphysical worth to that of white people. That life could be traded so cheaply, even plausibly (in the thought experiment) makes us pause for thought in terms of how we classify existential threat. Although the relationship between CRT and black existentialism may not always seem obvious we can see that there is a nihilistic streak in the work of Bell (1992) with regard to the prospects for survival. In addition, the drawing on the work of Fanon by authors who use CRT as part of their work which shows the perpetual violence encountered by people of colour in education as well as the enduring influence of Du Bois on CRT (Delgado and Stefancic 2001) shows the close connection between the two theories. What links CRT and black existentialism is a basic concern with existence and the meaning of human life under constant threat that can be thought to underpin any concern with social justice. From CRT and black existentialism, we therefore see that existential threat is one of negation through economic, social and political systems and there are degrees of graduation between these forms of existential threats and actual genocide or extermination. The links between these points and CBET might be considered as obtuse but, as we shall see in the next chapter, systems of education can play a role in forms of negation. Obviously, there are social justice implications in the way in which people are treated in terms of race and ethnicity in education. The ‘triaging’ by race and ethnicity of access to education courses, the ways in which certain groups are rationed access to educational routes and the fragility of links between education and the labour market for BAME groups are all part of marginalisation, in which vocational education plays a large part. As part of this process, and probably not coincidentally, these groups are also more likely to find themselves in vocational, CBET courses. However, social justice is not the whole story, and there is a more profound form of equality associated with the right to existence. It is this that CBET threatens through the reduction of the subject to a digital organism as I will show in the next chapter.

# Case

## Debris

#### No link to their impacts. Their plan just says to treat space as a global commons with shared owners. That doesn’t 100% foreclose private entities from existing.

#### Alt cause – broad space privatization and existing debris.

Muelhapt et al 19 [(Theodore J., Center for Orbital and Reentry Debris Studies, Center for Space Policy and Strategy, The Aerospace Corporation, 30 year Space Systems Analyst and Operator, Marlon E. Sorge, Jamie Morin, Robert S. Wilson), “Space traffic management in the new space era,” Journal of Space Safety Engineering, 6/18/19, <https://doi.org/10.1016/j.jsse.2019.05.007>] TDI

The last decade has seen rapid growth and change in the space industry, and an explosion of commercial and private activity. Terms like NewSpace or democratized space are often used to describe this global trend to develop faster and cheaper access to space, distinct from more traditional government-driven activities focused on security, political, or scientific activities. The easier access to space has opened participation to many more participants than was historically possible. This new activity could profoundly worsen the space debris environment, particularly in low Earth orbit (LEO), but there are also signs of progress and the outlook is encouraging. Many NewSpace operators are actively working to mitigate their impact. Nevertheless, NewSpace represents a significant break with past experience and business as usual will not work in this changed environment. New standards, space policy, and licensing approaches are powerful levers that can shape the future of operations and the debris environment.

2. Characterizing NewSpace: a step change in the space environment

In just the last few years, commercial companies have proposed, funded, and in a few cases begun deployment of very large constellations of small to medium-sized satellites. These constellations will add much more complexity to space operations. Table 1 shows some of the constellations that have been announced for launch in the next decade. Two dozen companies, when taken together, have proposed placing well over ~~20,000~~ [twenty thousand] satellites in orbit in the next ~~10~~ [10]years. For perspective, fewer than ~~8100~~[eight thousand one hundred] payloads have been placed in Earth orbit in the entire history of the space age, only 4800 [1] remain in orbit and approximately 1950 [2] of those are still active. And it isn't simply numbers – the mass in orbit will increase substantially, and long-term debris generation is strongly correlated with mass.

[Table 1 Omitted]

This table is in constant flux. It is based largely on U.S. filings with the Federal Communications Commission (FCC) and various press releases, but many of the companies here have already altered or abandoned their original plans, and new systems are no doubt in work. Although many of these large constellations may never be launched as listed, the traffic created if just half are successful would be more than double the number of payloads launched in the last 60 years and more than 6 times the number of currently active satellites.

Current space safety, space surveillance, collision avoidance (COLA) and debris mitigation processes have been designed for and have evolved with the current population profile, launch rates and density of LEO space.

By almost any metric used to measure activity in space, whether it is payloads in orbit, the size of constellations, the rate of launches, the economic stakes, the potential for debris creation, the number of conjunctions, NewSpace represents a fundamental change.

3. Compounding effects of better SSA, more satellites, and new operational concepts

The changes in the space environment can be seen on this figurative map of low Earth orbit. Fig. 1 shows the LEO environment as a function of altitude. The number of objects found in each 10 km “bin” is plotted on the horizontal axis, while the altitude is plotted vertically. Objects in elliptical orbits are distributed between bins as partial objects proportional to the time spent in each bin. Some notable resident systems are indicated in blue text on the right to provide an altitude reference. The (dotted) red line shows the number of objects in the current catalog tracked by the U.S. Space Surveillance Network (SSN). All the COLA alerts and actions that must be taken by the residents are due to their neighbors in the nearby bins, so the currently visible risk is proportional to the red line.



The red line of the current catalog does not represent the complete risk; it indicates the risk we can track and perhaps avoid. A rule of thumb is that the current SSN LEO catalog contains objects about 10 cm or larger. It is generally accepted that an impact in LEO with an object 1 cm or larger will cause damage likely to be fatal to a satellite's mission. Therefore, there is a large latent risk from unobserved debris. While we cannot currently track and catalog much smaller than 10 cm, experiments have been performed to detect and sample much smaller objects and statistically model the population at this size [3]. The (solid) blue line represents the model of the 1 cm and larger debris that is likely mission-ending, usually called lethal but not trackable. If LEO operators avoid collisions with all the objects in the red line, they are nonetheless inherently accepting the risk from the blue line. This risk is already present.

The (dashed) orange line is an estimate of the population at 5 cm and larger and is thus an estimate of what the catalog might conservatively be a few years after the Space Fence, a new radar system being built by the Air Force, comes on line (currently planned for 2019) [4]. Commercial companies offering space surveillance services, such as LeoLabs, ExoAnalytics, Analytic Graphics Inc., Lockheed, and Boeing, might also add to the number of objects currently tracked. Space Policy Directive 3 (SPD-3) [13] specifically seeks to expand the use of commercial SSA services.

Existing operators can expect a sharp increase in the number of warnings and alerts they will receive because of the increase in the cataloged population. Almost all the increase will come from newly detected debris [5].

The pace of safety operations for each satellite on orbit will significantly change because of the increase in the catalog from the Space Fence. This effect is compounded because the NewSpace constellations described in Table 1 will drastically change the profile of satellites in LEO. The green bars in Fig. 1 represent the number of objects that will be added to the catalog (red or orange lines) from only the NewSpace large LEO constellations at their operational altitudes. This does not include the rocket stages that launch them, or satellites in the process of being phased into or removed from the operational orbits. Neighbors of one of these new constellations may face a radically different operations environment than their current practices were designed to address.

Satellites in these large LEO constellations typically have planned operational lifetimes of 5–10 years. Some companies have proposed to dispose of their satellites using low thrust electric propulsion systems, which would spiral satellites down over a period of months or years from operating altitudes as high as 1500 km through lower orbits where the Hubble Space Telescope, the International Space Station, and other critical LEO satellites operate [6]. Similar propulsive techniques would raise replacement satellites from lower launch injection orbits to higher operational orbits. These disposal and replenishment activities will add thousands of satellites each year transiting through lower altitudes and posing a risk to all resident satellites in those lower orbits. More importantly, failures will occur both among transiting satellites and operational constellations, potentially leaving hundreds more stranded along the transit path.

**Probability – 0.1% chance of a collision.**

**Salter 16** [(Alexander William, Economics Professor at Texas Tech) “SPACE DEBRIS: A LAW AND ECONOMICS ANALYSIS OF THE ORBITAL COMMONS” 19 STAN. TECH. L. REV. 221 \*numbers replaced with English words] TDI

The probability of a collision is currently low. Bradley and Wein estimate that the maximum probability in LEO of a collision over the lifetime of a spacecraft remains below one in one thousand, conditional on continued compliance with NASA’s deorbiting guidelines.3 However, the possibility of a future “snowballing” effect, whereby debris collides with other objects, further congesting orbit space, remains a significant concern.4 Levin and Carroll estimate the average immediate destruction of wealth created by a collision to be approximately $30 million, with an additional $200 million in damages to all currently existing space assets from the debris created by the initial collision.5 The expected value of destroyed wealth because of collisions, currently small because of the low probability of a collision, can quickly become significant if future collisions result in runaway debris growth.

**Time frame – Kessler effect 200 years away**

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

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

Even with a 90% implementation of the commonly-adopted mitigation measures [...] the l e o debris population is expected to increase by an average of 30% in the next 200 years. The population growth is primarily driven by catastrophic collisions between 700 and 1000 km altitudes and such collisions are likely to occur every 5 to 9 years.89

#### Mutually Assured Destruction means Nuclear War is impossible because neither side wants to destroy themselves.

Clack 08 – Josh Clark"What's Mutual Assured Destruction?" 3 June 2008. HowStuffWorks.com. ,https://people.howstuffworks.com/mutual-assured-destruction.htm, // ccacy

As a result, the nuclear strategy doctrine of Mutual Assured Destruction (MAD) emerged in the mid-1960s. This doctrine was based upon the size of the countries' respective nuclear arsenals and their unwillingness to destroy civilization. MAD was unique at the time. Never before had two warring nations held the potential to erase humanity with the entry of a few computer codes and the turn of matching keys. Ironically, it was this powerful potential that guaranteed the world's safety: Nuclear capability was a deterrent against nuclear war. Because the U.S. and the USSR both had enough nuclear [missiles](https://science.howstuffworks.com/missile.htm) to clear each other from the [map](https://science.howstuffworks.com/environmental/earth/geophysics/map.htm), neither side could strike first. A first strike guaranteed a retaliatory counterstrike from the other side. So launching an attack would be tantamount to suicide -- the first striking nation could be certain that its people would be annihilated, too. The doctrine of MAD guided both sides toward deterrence of nuclear war. It could never be allowed to break out between the two nations. And it virtually guaranteed no conventional war would, either. Eventually, conventional tactics -- like non-nuclear missiles, [tanks](https://science.howstuffworks.com/m1-tank.htm) and troops -- would run out, and the inevitable conclusion of a nuclear strike would be reached. Since that end was deemed unacceptable by the Soviets and Americans, there was no chance of an engagement that could lead to this conclusion. But MAD didn’t exactly create an atmosphere in which Soviet premiers and American presidents felt like they could shake hands and call the whole thing off. The nations had very little trust in each other -- and with good reason. Each side was steadily building its nuclear arsenal to remain an equal party in the MAD doctrine. A détente, or uneasy truce, developed between the U.S. and USSR. They were like two gunslinging foes, adrift alone in a life boat, each armed and unwilling to sleep.

#### Alt causes swamp the Aff’s effect—Small fragments, noncompliance with de-orbit guidelines—BUT the impact is still nothing

Wein 9 – Professor & Senior Fellow at Stanford’s Center for International Security and Cooperation

Lawrence M. Wein, Jeffrey S. Skoll Professor of Management Science at Stanford University and Senior Fellow at Stanford’s Center for International Security and Cooperation, former DEC Leaders for Manufacturing Professor of Management Science at MIT, and Andrew M. Bradley, PhD-Institute for Computational and Mathematical Engineering at Stanford University, Space debris: Assessing risk and responsibility, Advances in Space Research 43 (2009) 1372–1390

More importantly, while our numerical results mimic earlier results (Liou and Johnson, 2005; Walker and Martin, 2004) that stressed the importance of postmission deorbiting, we do not necessarily agree with the claim that the only way to prevent future problems is to remove existing large intacts from space (Liou and Johnson, 2006, 2008). The divergence between our views and those in Liou and Johnson (2006, 2008) is perhaps due to the different performance metrics used. The root causes for alarm in Liou and Johnson (2006, 2008) appear to be the growth rate of fragments and the small increase in the rate of catastrophic collisions over the next 200 years (Liou and Johnson, 2008, Fig. 2). However, the great majority of catastrophic collisions in the SOI do not involve operational spacecraft, and are hazardous only in the sense that the fragments generated from such a collision could subsequently damage or destroy operational spacecraft. Therefore, we introduced the notion of the lifetime risk of an operational spacecraft as the primary performance metric. Our model predicts that the lifetime risk is <5x10^-4 [less than .0005%] over the next two centuries, and always stays <10^-3 [less than .001%] than if there is very high (>98%) spacecraft deorbiting compliance. These risks appear to be low relative to the immense cost and considerable technological uncertainty involved in removing large objects from space, are dwarfed by the ~20% historical mission-impacting (but not necessarily mission-ending) failure rate of spacecraft (Frost and Sullivan, 2004), and could be overestimated if improved traffic management techniques lower future collision risks (Johnson, 2004). Hence, the need to bring large objects down from space does not appear to be as clear cut as suggested in Liou and Johnson (2006, 2008). Nonetheless, our model does not incorporate the possibility of intentional catastrophic collisions (ASAT tests, space wars) that could conceivably occur in the future. In addition, Fig. 5 considers only catastrophic collisions, whereas noncatastrophic intact-fragment collisions could easily disable an operational spacecraft. If the operational lifetime risk is modified to include noncatastrophic collisions with fragments >= 10cm, then the sustainable risk rises by ~50%: it increases from 2.19x10^-2 [.0219%] to 3.09x10^-2 [.0309%] in the base case, and increases from 4.91x10^-4 [.000491%] to 7.94x10^-4 [.000794%] in the full compliance case. Moreover, if fragments >= 1 cm (rather than >= 10 cm) are harmful to spacecraft (Johnson, 2004), then we (as well as other researchers) could be underestimating the risk.

In summary, in the absence of the removal of large objects from space, the sustainable lifetime risks in Figs. 3–5 do not appear to be obviously above or below a tolerable level. Even if these risks are deemed acceptable, it is prudent to invest in research and development for space remediation technologies, which is a topic of current study (Proposal for forming an IAA study group, 2000). However, given the optimality of full deorbit compliance from a societal, sustainable perspective, and the sensitivity of sustainable lifetime risk to postmission deorbit compliance, the primary focus for policymakers should be on increasing compliance, which leads us to a discussion of economic instruments that could be used to address this issue.

**No war over space– Insurmountable barriers and everyone has an interest in keeping space peaceful**

**Dobos 19** [(Bohumil Doboš, scholar at the Institute of Political Studies, Faculty of Social Sciences, Charles University in Prague, Czech Republic, and a coordinator of the Geopolitical Studies Research Centre) “Geopolitics of the Outer Space, Chapter 3: Outer Space as a Military-Diplomatic Field,” Pgs. 48-49] TDI

Despite the theorized potential for the achievement of the terrestrial dominance throughout the utilization of the ultimate high ground and the ease of destruction of space-based assets by the potential space weaponry, the utilization of space weapons is with current technology and no effective means to protect them far from fulfilling this potential (Steinberg 2012, p. 255). In current global international political and technological setting, the utility of space weapons is very limited, even if we accept that the ultimate high ground presents the potential to get a decisive tangible military advantage (which is unclear). This stands among the reasons for the lack of their utilization so far. Last but not the least, it must be pointed out that the states also develop passive defense systems designed to protect the satellites on orbit or critical capabilities they provide. These further decrease the utility of space weapons. These systems include larger maneuvering capacities, launching of decoys, preparation of spare satellites that are ready for launch in case of ASAT attack on its twin on orbit, or attempts to decrease the visibility of satellites using paint or materials less visible from radars (Moltz 2014, p. 31). Finally, we must look at the main obstacles of connection of the outer space and warfare. The first set of barriers is comprised of physical obstructions. As has been presented in the previous chapter, the outer space is very challenging domain to operate in. Environmental factors still present the largest threat to any space military capabilities if compared to any man-made threats (Rendleman 2013, p. 79). A following issue that hinders military operations in the outer space is the predictability of orbital movement. If the reconnaissance satellite's orbit is known, the terrestrial actor might attempt to hide some critical capabilities-an option that is countered by new surveillance techniques (spectrometers, etc.) (Norris 2010, p. 196)-but the hide-and-seek game is on. This same principle is, however, in place for any other space asset-any nation with basic tracking capabilities may quickly detect whether the military asset or weapon is located above its territory or on the other side of the planet and thus mitigate the possible strategic impact of space weapons not aiming at mass destruction. Another possibility is to attempt to destroy the weapon in orbit. Given the level of development for the ASAT technology, it seems that they will prevail over any possible weapon system for the time to come. Next issue, directly connected to the first one, is the utilization of weak physical protection of space objects that need to be as light as possible to reach the orbit and to be able to withstand harsh conditions of the domain. This means that their protection against ASAT weapons is very limited, and, whereas some avoidance techniques are being discussed, they are of limited use in case of ASAT attack. We can thus add to the issue of predictability also the issue of easy destructibility of space weapons and other military hardware (Dolman 2005, p. 40; Anantatmula 2013, p. 137; Steinberg 2012, p. 255). Even if the high ground was effectively achieved and other nations could not attack the space assets directly, there is still a need for communication with those assets from Earth. There are also ground facilities that support and control such weapons located on the surface. Electromagnetic communication with satellites might be jammed or hacked and the ground facilities infiltrated or destroyed thus rendering the possible space weapons useless (Klein 2006, p. 105; Rendleman 2013, p. 81). This issue might be overcome by the establishment of a base controlling these assets outside the Earth-on Moon or lunar orbit, at lunar L-points, etc.-but this perspective remains, for now, unrealistic. Furthermore, no contemporary actor will risk full space weaponization in the face of possible competition and the possibility of rendering the outer space useless. No actor is dominant enough to prevent others to challenge any possible attempts to dominate the domain by military means. To quote 2016 Stratfor analysis, "(a) war in space would be devastating to all, and preventing it, rather than finding ways to fight it, will likely remain the goal" (Larnrani 20 16). This stands true unless some space actor finds a utility in disrupting the arena for others.

## Colonialism

#### Vote neg on presumotion. Space will be treated the same way, since the plan advocates for shared owners and that’s the squo, they cant solve any impacts bc it proves resources won’t be distributed democratically

#### Just saying, hey we are gonna treat it like a global commons doesn’t actually change anything when you still use the state and perpetuate the squo

1. Whitey On the Moon by Gil Scott-Heron, <https://www.youtube.com/watch?v=goh2x_G0ct4&ab_channel=AceRecordsLtd> [↑](#footnote-ref-1)