#### The colonization of outerspace has now infected the subjects imaginary to promote the mindless expansion of capitalist accumulation and growth

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Outer space is becoming **a space for capitalism**. We are entering a new era of the commercialization of space, geared towards generating profits from satellite launches, space tourism, asteroid mining, and related ventures. This era, driven by private corporations such as Elon Musk’s SpaceX and Jeff Bezos’s Blue Origins, has been **labeled by industry insiders as ‘NewSpace'**—in contrast to ‘Old Space', a Cold War-era mode of space relations when (allegedly) slow-moving, sluggish states dominated outer space. NewSpace marks the arrival of capitalism in space. While challenging the libertarian rhetoric of its proponents—space enterprises remain enmeshed in the state, relying on funding, physical infrastructure, technology transfers, regulatory frameworks, and symbolic support—NewSpace nevertheless heralds a novel form of human activity in space. Despite its humanistic, universalizing pretensions, however, NewSpace does not benefit humankind as such but rather a specific set of wealthy entrepreneurs, many of them originating in Silicon Valley, who strategically deploy humanist tropes to engender enthusiasm for their activities. We describe this complex as ‘capitalistkind'. Moreover, the arrival of capitalism in space is **fueled by the expansionary logic of capital accumulation**. Outer space serves as a **spatial fix,** **allowing capital to transcend its inherent terrestrial limitations**. In this way, the ultimate spatial fix is perhaps (outer) space itself. Introduction On 6 February 2018, the California-based Space Exploration Technologies Corp., also known as SpaceX, launched its first Falcon Heavy rocket, a powerful, partially reusable launch vehicle, into space from Cape Canaveral Launch Complex 39 in Florida. With its significant thrust and payload capacity, the Falcon Heavy had the ‘ability to lift into orbit nearly 64 metric tons…a mass greater than a 737 jetliner loaded with passengers, crew, luggage and fuel' (SpaceX, 2018). Multiple reusable parts, including first-stage boosters (and, in later versions, composite payload fairing)Footnote1 provided a lift capacity nearly twice that of the next-most powerful rocket in operation, the United Launch Alliance’s (ULA) Delta IV Heavy, and at nearly one-third the cost. With this first Falcon Heavy test flight, which produced widespread public enthusiasm and outpourings of support from both politicians and industry observers,Footnote2 SpaceX demonstrated that private corporations were busy redefining the domain of space exploration. SpaceX seemed to usher in an era differing markedly from that other period of astronautical excitement, the Cold War-era space race between the United States and the Soviet Union. Additionally, visions once restricted to the domain of science fiction now seemed increasingly attainable, freed from the (alleged) impediments of slow-moving nation-states: with the ascendancy of private corporations like SpaceX, satellite launches, space tourism, asteroid mining, and even the colonization of Mars seemed increasingly achievable (Cohen, 2017; Dickens and Ormrod, 2007a, 2007b; Klinger, 2017; Lewis, 1996). In this sense, SpaceX’s Falcon Heavy also carried a crucial ideological payload: the very idea of private enterprise and capitalist relations overtaking outer space.Footnote3 The Falcon Heavy conveyed this idea quite concretely. Onboard the rocket was an electric car, a Tesla Roadster (said to be Elon Musk’s personal vehicle), which functioned as the rocket’s ‘dummy load', playing David Bowie’s ‘Space Oddity' and ‘Life on Mars?' on repeat on the car’s stereo system. An enticing marketing stunt viewed by millions online through SpaceX’s YouTube live stream—with 2.3 million concurrent views, it was the second biggest live stream in YouTube history (Singleton, 2018)—the Falcon Heavy test flight embraced the logic of ‘cool capitalism' (Schleusener, 2014), with in-jokes referencing Douglas Adam’s Hitchhiker’s Guide to the Galaxy, while heralding the arrival of a commercialized space age, dubbed by industry insiders as the age of ‘NewSpace'.Footnote4 But how are we to understand NewSpace? In some ways, NewSpace signals the **emergence of capitalism in space**. The production of carrier rockets, placement of satellites into orbit around Earth, and the **exploration, exploitation, or colonization of outer space** (including planets, asteroids, and other celestial objects), will not be the work of humankind as such, a pure species-being (Gattungswesen), but of particular capitalist entrepreneurs who stand in for and represent humanity. Crucially, they will do so in ways **modulated by the exigencies of capital accumulation**. These enterprising capitalists are forging a new political-economic regime in space, a post-Fordism in space aimed at profit maximization and the apparent minimization of government interference. A new breed of charismatic, starry-eyed entrepreneurs, including Musk’s SpaceX, Richard Branson’s Virgin Galactic, and Amazon billionaire Jeff Bezos’s Blue Origin, to name but a selection, aim at becoming ‘capitalists in space' (Parker, 2009) or space capitalists. Neil Armstrong’s famous statement will have to be reformulated: space will not be the site of ‘one giant leap for mankind', but rather one giant leap for capitalistkind.Footnote5 With the ascendancy of NewSpace, humanity’s future in space will not be ‘ours', benefiting humanity tout court, but will rather be the result of particular capitalists, or capitalistkind,Footnote6 toiling to recuperate space and bring its vast domain into the fold of capital accumulation: NewSpace sees outer space as the domain of private enterprise, set to become the ‘first-trillion dollar industry', according to some estimates, and likely to produce the world’s first trillionaires (see, e.g., Honan, 2018)—as opposed to Old Space, a derisive moniker coined by enthusiastic proponents of capitalism-in-space, widely seen to have been the sole preserve of the state and a handful of giant aerospace corporations, including Boeing and Lockheed Martin, in Cold War-era Space Age. Under Donald Trump’s presidency, the adherents of NewSpace have found a ready political partner. The commercialization of outer space was already well under way with Obama’s 2010 National Space Policy, which emphasized ‘promoting and supporting a competitive U. S. commercial space sector', which was ‘considered vital to…continued progress in space' (Tronchetti, 2013, p. 67–68). But the Trump administration has aggressively pursued the deregulation of outer space in the service of profit margins. Wilbur Ross, President Trump’s Secretary of Commerce, has eagerly supported the private space industry by pushing the dismantling of regulatory frameworks. As Ross emphatically stated, ‘The rate of regulatory change must accelerate until it can match the rate of technological change!' (Foust, 2018a). Trump has proposed privatizing the provision of supplies to the International Space Station (ISS) while re-establishing the Cold War-era National Space Council, which includes members from Lockheed Martin, Boeing, ULA, and a series of NewSpace actors, such as SpaceX and Blue Origin. Ross was visibly enthusiastic about SpaceX’s Falcon Heavy launch in February 2018 and seemed to embrace Musk’s marketing ploy. ‘It was really quite an amazing thing', Ross said. ‘At the end of it, you have that little red Tesla hurdling [sic] off to an orbit around the sun and the moon' (Bryan, 2018). That same month, Ross spoke before the National Space Council, commenting appreciatively that ‘space is already a $330 billion industry' that was set to become a ‘multitrillion-dollar one in coming decades'. He noted that private corporations needed ‘all the help we can give them' and said it was ‘time to unshackle business activity in space' (Department of Commerce, 2018). Secretary Ross’s remarks followed on the heels of the American Space Commerce Free Enterprise Act, a U.S. House of Representatives bill introduced in 2017, which, in a remarkable volte-face, unilaterally declared that ‘space is not a global commons', a crucial departure from ratified international treaties that paved the way for private property rights and the exploitation of precious resources in outer space. In case anyone had missed this little-noticed policy démarche, tucked away in the midst of an obscure piece of legislation, one of Trump’s supporters, the executive director of the National Space Council, Scott Pace, publicly reiterated that ‘outer space is not…the “common heritage of mankind”, not “res communis”, nor is it a public good' (Pace, 2017). Instead, outer space was quickly being recast as a private good or a space for private property. As the United States became ‘ “open for business” in space' (Smith, 2017), in the words of one Republican congressman, space itself was being opened up to the interests of private enterprise. The Outer Space Treaty of 1967 established space as terra nullius. One of the treaty’s premises is that no celestial body can be claimed as the property of any particular state, so that ‘outer space…is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means'.Footnote7 While this does not prevent nations from extracting resources from celestial bodies, there is a clear requirement that these activities benefit all of Earth’s inhabitants (Tronchetti, 2013, p. 14; Lyall and Larsen, 2009), paving the way for kind of communism in space which precludes the proclivities of capitalistkind. As noted, however, the Outer Space Treaty’s assertion of space as a commons has come under pressure in recent years, at first in the form of so many quasi-comical ventures, bordering on fraudulent shams, with a flourishing online trade in ‘lunar property'— ‘Everybody Is Saying It…Nothing Could Be Greater Than To Own Your Own Crater!'Footnote8—including the production of seemingly authentic land deeds that remain practically unenforceable and contravened by treaty obligations anyway. More recently, its status as commons has been denied by President Trump and leading US Republicans. Communism in space was a possibility only so long as space was materially inaccessible to capitalistkind: as space becomes a probable site of profitable ventures, the Outer Space Treaty’s proto-communism must falter and fade away. Certain parallels exist between the exploration and colonization of outer space and similar maritime ventures back on Earth. To take but one limited aspect of the overlapping legal issues raised by these two areas, that of resource exploitation: the 1982 United Nations Convention on the Law of the Sea (UNCLOS) established that the ‘seabed and ocean floor' beyond a nation’s territorial waters (or ‘the Area') are the ‘common heritage of mankind, the exploration and exploitation of which shall be carried out for the benefit of mankind as a whole'. Like outer space, Earth’s seabed is part of the commons. Similarly, the International Seabed Authority, which was established to oversee the 1982 convention, is to ‘provide for the equitable sharing of financial and other economic benefits derived from activities in the Area' (UN, 1982, p. 71). In principle, then, any profits arising from, e.g., the mining of polymetallic nodules, are to be shared with all of humankind, including ‘developing States, particularly the least developed and the land-locked among them' (UN, 1982, p. 56). Whether this is likely is to happen is, according to a recent review, likely to be hampered by two factors. First, the commercial exploitation of seabed metals, which is first and foremost a technical issue, ‘seems as far away as ever' (Wood, 2008). Second, and perhaps more importantly, the political climate surrounding the creation and ratification (with the exception of the United States) of the 1982 convention has now appreciably shifted: ‘Much of the ideological passion that characterized the debates in the First Committee of the Third UN Conference on the Law of the Sea, and to some degree also in the Preparatory Commission, have now subsided' (Wood, 2008). As with outer space, the ocean floor becomes a legal site of contestation the moment states and corporations are technically capable of exploiting it. This article adopts an approach broadly derived from the critical theory tradition to analyze NewSpace. Drawing on David Harvey’s notion of spatial fixes, as well as key theoretical insights from such varied thinkers as Hegel, Marx, Bourdieu, and Deleuze and Guattari, this article asks in what ways the NewSpace paradigm can be rethought through a critical (neo-Marxist) political economy framework. Below, we advance three crucial arguments. First, there is an expedient conflation of capitalist interests with a universalizing notion of the interests of humanity. Second, the state continues to play an important role in supporting capital accumulation in space; a key tension in this area is the question of the continued role of the state in facilitating and financing NewSpace ventures—a role that is simultaneously downplayed and even, on occasion, dismissed by NewSpace actors themselves. Finally, we reassess the commercialization of space through Harvey’s concept of the spatial fix, arguing that outer space serves as an important outlpet for surplus capital, a site of knowledge production and technological innovation, and a potential reservoir of untapped raw materials. While the future is inherently uncertain, the article spotlights the expansive tendencies of global capital and describe the ways NewSpace actors themselves have come to view outer space as the probable future site of a post-terrestrial form of capital accumulation. The universalization of capitalism The 2010s may very well be remembered as the ‘Age of NewSpace', the decade when outer space was turned into a capitalist space, when private corporations pushed the price of launches, satellites, and space infrastructure downwards, exerting what industry insiders call the ‘SpaceX effect' (Henry, 2018), centered on the technological achievement of ‘reusability', recovering used rocket boosters for additional launches, promising to drastically reduce the price of going to space (Morring, 2016). As one report observes, ‘Not only has the number of private companies engaged in space exploration grown remarkably in recent years, these companies are quickly besting their government-sponsored competitors' (Houser, 2017). What the rockets, shuttles, ships, and landing pods will carry beneath their payload fairing or in their cargo hold, however, along with supplies and satellites, is the capitalist worldview, a particular ideology—just as Robinson Crusoe, in Marx’s ironic retelling in Capital, ‘having saved a watch, ledger, ink and pen from the shipwreck… soon begins, like a good Englishman, to keep a set of books' (Marx, 1976, p. 170), brings with him English political economy—'Freedom, Equality, Property and Bentham', as Marx (1976, p. 280) says elsewhere—to his desert island. In early 2018, astronomers across the world learned that a New Zealand start-up, Rocket Lab, which aimed to launch thousands of miniature satellites into orbit around Earth (so-called ‘smallsats'), had planned to launch a giant, shining ‘disco ball'—the ‘Humanity Star'—into orbit around Earth. It was an elaborate marketing stunt masked by humanistic idealism. ‘No matter where you are in the world, or what is happening in your life', said Rocket Lab CEO Peter Beck, ‘everyone will be able to see the Humanity Star in the night sky' (Amos, 2018). Many astronomers expressed outrage at these plans, fearing that the light from the Human Star would threaten their ability to carry out scientific observations. But while these astronomers were incensed by the idea of a bright geodesic object disrupting their ability to carry out observations, concerns with the effects of the arrival of capitalistkind on their ability to collect data were non-existent. The astronomical community was angered by the idea of a material, concrete, visible object polluting “pure” scientific data, but it paid less attention to the (invisible and abstract) recuperation of the night sky as it was brought into the fold of capitalism. In an interview, Beck was quizzed about the Humanity Star and asked by a reporter about the difficulties of generating profits in space (Tucker, 2018). To this Beck replied, ‘It has always been a government domain, but we’re witnessing the democratization of it…[I]t [is] turning into a commercially dominated domain'. Beck established an equivalence established between the dissolution of space as the rightful domain of states and the advent of profit-making ventures as signs of ‘democratization'. In space, according to Beck’s logic, democratization involves the disappearance of the state and the rise of capital. The argument, of course, is impeccably post-statist: on this account, states are monolithic, conservative Leviathans beyond the reach of popular control; corporations, on the other hand, are in principle representatives of the everyman: in the age of the start-up, any humble citizen could in theory become an agent of disruption, a force for change, an explorer of space, and a potential member of the cadre of capitalistkind. Following this logic, the question for the entrepreneurs of **NewSpace is how to monetize outer space**, which means turning space into a space for capital; their **question is how they can deplanetarize capital and universalize** it, literally speaking, that is, **turn the Universe into a universe** for capital. In this light, Peter Beck’s distortion of democratic ideals appears eminently sensible, equating democratization with monetization, that is, capital liberated from its earthly tethers. Emblematic of this capitalist turn in space was the founding of Moon Express in 2011, composed of a ‘team of prominent Silicon Valley entrepreneurs…shooting for the moon with a new private venture aimed at scouring the lunar surface for precious metals and rare metallic elements' (Hennigan, 2011). Following Google’s Lunar XPRIZE—an intertwining of Silicon Valley and NewSpace’s capitalistkind—which promised a $20 million prize for the first private company to land a spacecraft on the Moon, travel 500 meters, and transmit high-definition images back to Earth, all by March 2018,Footnote9 Moon Express claimed that it would be capable of landing on the lunar surface and earn the cash prize. Their stated goal was twofold: first, to mine rare resource like Helium-3 (a steadily dwindling scarce resources on Earth), gold, platinum group metals, and water, and, second, to carry out scientific work that would ‘help researchers develop human space colonies for future generations' (Ioannou, 2017). The ordering is telling: first profits, then humanity. These were the hollow, insubstantial promises of a venture-capitalized NewSpace enterprise: in early 2018, Google announced that none of the five teams competing for the Lunar XPRIZE, including Moon Express, would reach their stated objectives by the 31 March deadline and they were taking their money back (Grush, 2018). In this sense, it was typical for NewSpace in its formative years: a corporate field populated by (overly exuberant) private enterprises who promised more than they could deliver. But the belief in NewSpace is real enough. In a tome bursting with the optimism of NewSpace, Wohlforth and Hendrix claim that ‘the commercial spaceflight industry is transforming our sense of possibility. Using Silicon Valley’s money and innovative confidence, it will soon bring mass space products to the market' (2016, p. 7). The trope of humanity plays a key role in the rhetoric of the adherents of NewSpace. To fulfill the objectives of NewSpace, including **profit maximization and the exploitation** of celestial bodies, the symbolic figure of a **shared humanity** serves a useful purpose, **camouflaging the conquest of space by capitalism** with a dream of humanity boldly venturing forth into the dark unknown, thereby also providing the legitimacy and enthusiasm needed to support bolster the legitimacy of NewSpace. So long as the stargazers and SpaceX watchers are permitted their fill of ‘collective effervescence', to use Durkheim’s (1995, p. 228) concept, capitalist entrepreneurs will be able to pursue their business interests more or less as they please. The spectacle of outer space is crucial in this regard. Crucially, however, and despite this spectacle, SpaceX’s technology might not necessarily be more sophisticated than its competitors or predecessors. Some industry insiders have rebuffed some of the more the spectacular claims of NewSpace’s proponents, arguing that launch vehicle reusability requires a (perhaps prohibitively) expensive refurbishing of the rocket engines involved in launches: ‘The economics will depend on how many times a booster can be flown, and how much the individual expense will be to refurbish the booster…each time' (Chang, 2017). Reusability may be a technological dead-end because of the inherently stressful effects of a rocket launch on the launch vehicle’s components, with extreme limitations on reusability beyond second-use as well as added risks of malfunctions that customers and insurers are likely to wish to avoid. Furthermore, the Falcon Heavy still has not matched the power and payload capacity of NASA’s Saturn V, a product of 1960s military-industrial engineering and Fordist state spending programs. What SpaceX and other NewSpace corporations do with great ingenuity, however, is to **manage the spectacle of outer space**, producing outpourings of public fervor, aided by a widespread adherence to the ‘Californian Ideology' (Barbrook and Cameron, 1996), or **post-statist techno-utopianism**, in many postindustrialized societies. The very centrality of these maneuvers has initiated a new phase in the history of capitalist relations, that of ‘**charismatic accumulation'**—certainly not in the sense of any ‘objective' or inherent charismatic authority, but with a form of illusion, to speak with Bourdieu, vested in the members of capitalistkind by their uncanny ability to spin mythologizing self-narratives. This has always been part of the capitalist game, from Henry Ford and onwards, but the charismatic mission gains a special potency in the grandiose designs of NewSpace’s entrepreneurs. Every SpaceX launch is a quasi-religious spectacle, observed by millions capable of producing a real sense of wonder in a condition of (legitimizing) collective effervescence. Outer space necessarily reduces inter-human difference to a common denominator or a shared species-being. An important leitmotiv in many Hollywood science fiction movies, including Arrival (2016), is that a first encounter with an alien species of intelligent beings tends to flatten all human difference (including ethnoracial and national categories), thereby restoring humankind to its proper universality (see also Novoa, 2016). Ambassadors of Earth as a whole, not representatives of particular nations, step forth to meet alien emissaries. But even in the absence of such an encounter, the search for habitable domains (or rather, profitable locales) beyond Earth will necessarily forge a shared conception of the human condition, initiated with the Pale Blue Dot photograph in 1990. Typical of this sentiment are the words of the astronomer Carl Sagan, who famously observed of this photograph: ‘On it everyone you love, everyone you know, everyone you ever heard of, every human being who ever was, lived out their lives'. This naïvely humanistic vision has been one of the dominant tropes in the discourse on space since the 1950s, and it remains strong today, as with the claims of the United Nations Office for Outer Space Affairs (UNOOSA) that their task is to ‘uphold the vision of a more equitable future for all humankind through shared achievements in space'. This representational tendency mobilizes humanism to generate enthusiasm about space-related activities. **But such representations are increasingly being recuperated by capitalist enterprise, so that it is not humankind but its modulation by space capitalists that will launch into the dark unknown**. It is not humankind but capitalistkind that ventures forth. In early 2018, NASA was set to request $150 million in its 2019 budget to ‘enable the development and maturation of commercial entities and capabilities which will ensure that commercial successors to the ISS…are operational when they are needed', only one of many signs that space is becoming a space for capitalism. According to one estimate, the value of just one single asteroid would be more than $20 trillion in rare earth and platinum-group metals (Lewis, 1996), a precious prize indeed for profit-hungry corporations.Footnote10 Even the UNOOSA spoke vociferously in favor of the commercialization of space, appealing variously to the ‘industry and private sector' and elevating the ‘space economy' to a central pillar in its Space2030 Agenda (including the ‘use of resources that create and provide value and benefits to the world population in the course of exploring, understanding and utilizing space'), even as the UN agency falls back on a humanistic, almost social-democratic vision of the equitable distribution of benefits (and profits) from space mining, exploration, and colonization (UNOOSA, 2018). We find evidence of this strategic humanism in all manner of pronouncements from NewSpace entrepreneurs. To take but oncae example: Naveen Jain, the chairman and co-founder of MoonEx, a lunar commercialization firm, has claimed that ‘from an entrepreneur’s perspective, the moon has never truly been explored'. The moon, Jain has claimed, ‘could hold resources that benefit Earth and all humanity' (Hennigan, 2011). We should note the recourse to the trope of all of humanity by this NewSpace entrepreneur, mimicked in the 1979 Moon Agreement, a UN treaty, which also held that the Moon’s resources are ‘the common heritage of mankind' (Tronchetti, 2013, p. 13).Footnote11 In a purely factual sense, of course, Jain is wrong: Google Moon offers high-resolution images of the lunar surface,Footnote12 and the moon has already been explored, in the sense of being mapped, albeit rudimentarily and with room for further data collection. Crucially, however, these cartographic techniques have not been put to capitalist uses: mapping minerals, for instance, or producing detailed schemata that might one day turn the Moon into a ‘gas station' for commercial space ventures, as Wilbur Ross, Trump’s Secretary of Commerce, has proposed (Bryan, 2018). What is lacking, in short, are capitalist maps of the Moon, i.e., a cartography for capital. But as Klinger (2017: 199) notes, even though no one is ‘actively mining the Moon' at present, at least ‘six national space programs, fifty private firms, and one graduate engineering program, are intent on figuring out how to do so'; furthermore, Klinger draws attention to mapping efforts that have revealed high an abundance of rare earth metals, thorium, and iron in the Moon’s ‘Mare Procellarum KREEP' region (Klinger, 2017, p. 203). We have already noted that it is not humanity, conceived as species-being, a Gattungswesen, that makes its way into space. The term Gattungswesen, of course, has a long intellectual pedigree, harking back to Hegel, Feuerbach, Marx, and others. The term can ‘be naturally applied both to the individual human being and to the common nature or essence which resides in every individual man and woman', Allan Wood (2004, p. 17) writes, as well as ‘to the entire human race, referring to humanity as a single collective entity or else to the essential property which characterizes this entity and makes it a single distinctive thing in its own right'. **Significantly, the adherents of NewSpace often resort to the idea of humanity in its broad universality (e.g., Musk, 2017), but this denies and distorts the modulation of humanity by its imbrication with the project of global (and post-global, i.e., space-bound) capitalism. It is precisely the sort of false universality implied in the humanism of the supporters of NewSpace that Marx subjected to a scathing critique in the sixth of his Theses on Feuerbach**. Here Marx noted that the human essence is not made up of some ‘abstraction inherent in each single individual' (1998, p. 570). Instead, humans are defined by the ‘ensemble of social relations' in which they are enmeshed. Under NewSpace, it is not humanity, plain and simple, that ventures forth, but a specific set of capitalist entrepreneurs, carrying a particular ideological payload, alongside their satellites, instruments, and supplies, a point noted by other sociologists of outer space, or ‘astrosociologists' (Dickens and Ormrod, 2007a, 2007b). The spatial fix of outer space No longer terra nullius, space is now the **new terra firma of capitalistkind**: its naturalized terroir, its next necessary terrain. The logic of capitalism dictates that **capital should seek to expand outwards into the vastness of space**, a point recognized by a recent ethnography of NewSpace actors (Valentine, 2016, p. 1050). The operations of **capitalistkind serve to resolve a series of (potential) crises of capitalism, revolving around the slow, steady decline of spatial fixes (**see e.g., Harvey, 1985, p. 51–66) as they come crashing up against the quickly vanishing blank spaces remaining on earthly maps and declining (terrestrial) opportunities for profitable investment of surplus capital (Dickens and Ormrod, 2007a, p. 49–78). A ‘**spatial fix' involves the geographic modulation of capital accumulation, consisting in the outward expansion of capital onto new geographic terrains, or into new spaces, with the aim of filling a gap in the home terrains of capita**l. Jessop (2006, p. 149) notes that spatial fixes may involve a number of strategies, including the creation of new markets within the capitalist world, engaging in trade with non-capitalist economies, and exporting surplus capital to undeveloped or underdeveloped regions. The first two address the problem of insufficient demand and the latter option creates a productive (or valorizing) outlet for excess capital. **Capitalism must regularly discover, develop, and appropriate such new spaces because of its inherent tendency to generate surplus capital, i.e., capital bereft of profitable purpose**. In Harvey’s (2006, p. xviii) terms, a spatial fix revolves around **‘geographical expansions and restructuring…as a temporary solution to crises understood…in terms of the overaccumulation of capital'**. It is a temporary solution because **these newly appropriated spaces will in turn become exhausted of profitable potential and are likely to produce their own stocks of surplus capital; while ‘capital surpluses that otherwise stood to be devalued,** could be absorbed through geographical expansions and spatio-temporal displacements' (Harvey, 2006, p. xviii), this **outwards drive of capitalism is inherently limitless: there is no end point or final destination for capitalism. Instead, capitalism must continuously propel itself onwards in search of pristine sites of renewed capital accumulation**. In this way, Harvey writes, society constantly ‘creates fresh productive powers elsewhere to absorb its overaccumulated capital' (Harvey, 1981, p. 8). Historically, spatial fixes have played an important role in conserving the capitalist system. As Jessop (2006, p. 149) points out, ‘The export of surplus money capital, surplus commodities, and/or surplus labour-power outside the space(s) where they originate enabled capital to avoid, at least for a period, the threat of devaluation'. But these new spaces for capital are not necessarily limited to physical terrains, as with colonial expansion in the nineteenth century; as Greene and Joseph (2015) note, various digital spaces, such as the Internet, can also be considered as spatial fixes: the Web absorbs overaccumulated capital, heightens consumption of virtual and physical goods, and makes inexpensive, flexible sources of labor available to employers. Greene and Joseph offer the example of online high-speed frequency trading as a digital spatial fix that furthers the ‘annihilation of space by time' first noted by Marx in his Grundrisse (see Marx, 1973, p. 524). Outer space serves at least two purposes in this regard. In the short-to medium-term, it allows for the export of surplus capital into emerging industries, such as satellite imaging and communication. These are significant sites of capital accumulation: global revenues in the worldwide satellite market in 2016 amounted to $260 billion (SIA, 2017, p. 4). Clearly, much of this activity is taking place ‘on the ground'; it is occurring in the ‘terrestrial economy'. But all that capital would have to find some other meaningful or productive outlet were it not for the expansion of capital into space. Second, outer space serves as an arena of technological innovation, which feeds back into the terrestrial economy, helping to avert crisis by pushing capital out of technological stagnation and innovation shortfalls. In short, outer space serves as a spatial fix. It **swallows up surplus capital**, promising to deliver valuable resources, technological innovations, and communication services to capitalists back on Earth. This places outer space on the same level as traditional colonization, analyzed in Hegel’s Philosophy of Right, which Hegel thought of as a product of the ‘**inner dialectic of civil society', which drives the market to ‘push beyond its own limits and seek markets, and so its necessary means of subsistence**, in other lands which are either deficient in the goods it has overproduced, or else generally backward in creative industry, etc.' (Hegel, 2008, p. 222). In this regard, SpaceX and related ventures are not so very different from maritime colonialists and the trader-exploiters of the British East India Company. But there is something new at stake. As the Silicon Valley entrepreneur Peter Diamandis has gleefully noted: ‘There are twenty-trillion-dollar checks up there, waiting to be cashed!' (Seaney and Glendenning, 2016). Capitalistkind consists in the **naturalization of capitalist consciousness and practice**, the (**false) universalization of a particular mode of political economy as inherent to the human condition, followed by the projection of this naturalized universality into space—capitalist humanity as a Fukuyamite ‘end of history', the end-point of (earthly) historical unfolding, but the starting point of humanity’s first serious advances in space.** What role, then, for the state? The frontiersmen of NewSpace tend to think of themselves as libertarians, pioneers beyond the domain of state bureaucracy (see Nelson and Block, 2018). ‘The government should leave the design work and ownership of the product to the private sector', the author of a 2017 report, Capitalism in Space, advocates. ‘The private companies know best how to build their own products to maximize performance while lowering cost' (Zimmerman, 2017, p. 27). One ethnographer notes that ‘politically, right-libertarianism prevails' amongst NewSpace entrepreneurs (Valentine, 2016, p. 1047–1048). Just as Donald Rumsfeld dismissed the opponents to the Iraq War as ‘Old Europe', so too are state entities’ interests in space exploration shrugged off as symptoms of ‘Old Space'. Elon Musk, we are told in a recent biography, unlike the sluggish Big State actors of yore, ‘would apply some of the start-up techniques he’d learned in Silicon Valley to run SpaceX lean and fast…As a private company, SpaceX would also avoid the waste and cost overruns associated with government contractors' (Vance, 2015, p. 114). This libertarianism-in-space has found a willing chorus of academic supporters. The legal scholar Virgiliu Pop introduces the notion of the frontier paradigm (combining laissez-faire economics, market competition, and an individualist ethic) into the domain of space law, claiming that this paradigm has ‘proven its worth on our planet' and will ‘most likely…do so in the extraterrestrial realms' as well (Pop, 2009, p. vi). This frontier paradigm is not entirely new: a ‘Columbus mythology', centering on the ‘noble explorer', was continuously evoked in the United States during the Cold War space race (Dickens and Ormrod, 2016, pp. 79, 162–164). But the entrepreneurial libertarianism of capitalistkind is undermined by the reliance of the entire NewSpace complex on extensive support from the state, ‘a public-private financing model underpinning long-shot start-ups' that in the case of Musk’s three main companies (SpaceX, SolarCity Corp., and Tesla) has been underpinned by $4.9 billion dollars in government subsidies (Hirsch, 2015). In the nascent field of space tourism, Cohen (2017) argues that what began as an almost entirely private venture quickly ground to a halt in the face of insurmountable technical and financial obstacles, only solved by piggybacking on large state-run projects, such as selling trips to the International Space Station, against the objections of NASA scientists. The business model of NewSpace depends on the taxpayer’s dollar while making pretensions to individual self-reliance. The vast majority of present-day clients of private aerospace corporations are government clients, usually military in origin. Furthermore, the bulk of rocket launches in the United States take place on government property, usually operated by the US Air Force or NASA.Footnote13 This inward tension between state dependency and capitalist autonomy is itself a product of neoliberalism’s contradictory demand for a minimal, “slim” state, while simultaneously (and in fact) relying on a state reengineered and retooled for the purposes of capital accumulation (Wacquant, 2012). As Lazzarato writes, ‘To be able to be “laissez-faire”, it is necessary to intervene a great deal' (2017, p. 7). Space libertarianism is libertarian in name only: behind every NewSpace venture looms a thick web of government spending programs, regulatory agencies, public infrastructure, and universities bolstered by research grants from the state. SpaceX would not exist were it not for state-sponsored contracts of satellite launches. Similarly, in 2018, the US Defense Advanced Research Projects Agency (DARPA)—the famed origin of the World Wide Web—announced that it would launch a ‘responsive launch competition', meaning essentially the reuse of launch vehicles, representing an attempt by the state to ‘harness growing commercial capabilities' and place them in the service of the state’s interest in ensuring ‘national security' (Foust, 2018b). This libertarianism has been steadily growing in the nexus between Silicon Valley, Stanford University, Wall Street, and the Washington political establishment, which tend to place a high value on Randian ‘objectivism' and participate in a long American intellectual heritage of individualistic ‘bootstrapping' and (allegedly) gritty self-reliance. But as Nelson and Block (2018, p. 189–197) recognize, one of the central symbolic operations of capitalistkind resides in concealing its reliance on the state by mobilizing the charm of its entrepreneurial constituents and the spectacle of space. There is a case to be made for the idea that SpaceX and its ilk resemble semi-private corporations like the British East India Company. The latter, “incorporated by royal charter from Her Majesty Queen Elizabeth I in 1600 to trade in silk and spices, and other profitable Indian commodities,” recruited soldiers and built a ‘commercial business [that] quickly became a business of conquest' (Tharoor, 2017). SpaceX, too, is increasingly imbricated with an attempt on the part of a particular state, the United States, to colonize and appropriate resources derived from a particular area, that of outer space; it, too, depends on the infrastructure, contracts, and regulatory environment that thus far only a state seems able to provide. Its private character, like that of the East India Company, is troubled by being deeply embedded in the state. As one commentator has observed of SpaceX, ‘If there’s a consistent charge against Elon Musk and his high-flying companies…it’s that they’re not really examples of independent, innovative market capitalism. Rather, they’re government contractors, dependent on taxpayer money to stay afloat' (cit. Nelson and Block, 2018, p. 189). Perhaps this should not come as a surprise. As Bourdieu (2005, p. 12) observed, ‘The economic field is, more than any other, inhabited by the state, which contributes at every moment to its existence and persistence, and also to the structure of the relations of force that characterize it'. The state lays out the preconditions for market exchanges. Under neoliberalism, the state is the preeminent facilitator of markets. The neoliberal state is not so much a Minimalstaat, night watchman state, or slim state as it is the prima causa of market society (see, e.g., Wacquant, 2012). Similarly, in the political theory of Deleuze and Guattari, any economic development presupposes the political differentiation caused by the state (Deleuze and Guattari, 2004a, p. 237–238). Even in the global environment of contemporary capitalism, the market cannot operate without the state becoming integrated with capitalism itself, as ‘it is the modern state that gives capitalism its models of realization' (Deleuze and Guattari, 2004b, p. 480). For capitalism to survive in outer space, the state must create a regulatory environment, subsidize infrastructure, and hand down contracts – in short, assemble outer space as a domain made accessible in legal, technical, and economic ways. Universalizing capital As Earth’s empty spaces are filled, as our planet comes to be shorn of blank places, capitalistkind emerges to rescue capitalism from its terrestrial limitations, launching space rockets, placing satellites into orbit, appropriating extraterrestrial resources, and, perhaps one day, building colonies on distant planets like Mars. But why limit ourselves to Mars? As of mid-2017, NASA’s Kepler observatory had discovered more than 5000 exoplanets—planets that seem like promising alternatives to Earth, located at an appropriate distance from their respective suns in the famed ‘Goldilocks zone'. These ‘planetary candidates', as they are known—that is, candidates for the replacement of Earth, capable of supporting human life with only minimal technological augmentation or cybernetic re-engineering—are above all viable candidates for selection by specific capitalists seeking to discover new profitable ventures beyond the limits of an Earth-bound capitalism. Space reveals the impotence of the neoliberal, post-Fordist state, its incapacity and unwillingness to embark on gigantic infrastructural projects, to project itself outwards, and to fire the imagination of (actual) humankind. Capitalistkind steps in to fill the vacuum left behind by a state that lacks what Mann (2012, p. 170) calls ‘infrastructural power'. The old question, the question of Old Space, was quite simply: is this planet a viable site for humankind, a suitable homeland for the reproduction of human life away from Earth? But the new question, the question for NewSpace, will be: can this celestial body support capitalistkind? Will it support the interests of capitalist entrepreneurs, answering to the capitalist desire for continued accumulation? While some elements of the astrosociological community, such as the Astrosociology Research Institute (ARI),Footnote14 insist on elucidating the “human dimension” in outer space, Dickens and Ormrod recognize that this humanization-through-capitalism really involves the ‘commodification of the universe' (2007b, p. 2). While Dickens and Ormrod develop similar arguments to those sketched here—from their concept of an ‘outer spatial fix' to their argument about outer space becoming woven into circuits of capital accumulation—they were writing at a time when their remarks necessarily remained speculative: the commercialization of space was still in its infancy. In an inversion of Hegel’s owl of Minerva, reality has since largely confirmed their ideas and caught up with theory. Above all, when considering the various ventures ongoing in space today, it is not so much the universalizing human dimension as the specifically capitalist dimension that is striking. With the advent of NewSpace, outer space is becoming not the domain of a common humanity but of private capital. The arguments laid out above mirror an ongoing turn in critical scholarship away from the notion of the Anthropocene towards a more rigorously political-economic concept of Capitalocene, premised on the ‘claim that capitalism is the pivot of today’s biospheric crisis' (Moore, 2016, p. xi). Just as the exponents of the concept of Capitalocene emphasize that it is capitalism, and not humanity as such, that is the driving force behind environmental transformation, so too does the notion of capitalistkind emphasize that it is not humankind tout court but rather a set of specific capitalist entrepreneurs who are acting as the central transformative agents of and in outer space, with the ‘ever-increasing infiltration of capital' into what was formerly the domain of the state (Dickens and Ormrod, 2007a, p. 6). We can also think about these issues in terms of what Philippopoulos-Mihalopoulos (2015) terms ‘spatial justice'. This concept captures the fact that struggles over justice are often struggles to occupy space, as the term is more conventionally understood, as with urban battles over the ‘right to the city' (Harvey, 2008), to provide just one example. But the same also holds true for outer space: there is an ongoing struggle over the right to take up space in outer space. So far, the capitalist side appears to be winning. As the proto-communism of the Cold War-era Outer Space Treaty is abandoned—in tandem with the increased technological feasibility of exploiting resources and accumulating profits in outer space—spatial justice in outer space increasingly comes to mean the ‘justice' of capital, capitalistkind taking the place of humankind. It is comparatively easy to declare that outer space is a commons, as the Outer Space Treaty did in the late 1960s, when that domain is, for all practical purposes, inaccessible to capital; with the heightened accessibility of outer space, however, it is unsurprising that central political agents, such as President Trump’s administration, should seek to dismantle this regulatory framework and ensure the smooth functioning of capital accumulation beyond the terrains of Earth. What kind of capitalism is being projected into space? The complexity of state-market relations is sufficient to force us to hedge against a simplified reading of space commercialization: it is not a matter of states against markets, as if the two were mutually exclusive. Instead, as Bratton (2015) suggests, we are witnessing the emergence of a ‘stack', a complex intertwining of commercial, geopolitical, and technological concerns, which challenges previous notions of state sovereignty. This can be seen as a hybridized state-market form, with technology playing a central role in reciprocal processes of political and economic transformation. On the one hand, outer space was in some sense always already the domain of marketization, albeit to a limited extent, even during the Cold War, from the first commercial satellite launch in the early 1960s to President Ronald Reagan’s implementation of the Commercial Space Launch Act of 1984, which aimed to encourage private enterprise to take an interest in an emerging launch market. As Hermann Bondi, the head of the European Space Organization, wrote in the early 1970s, ‘It is clear…that there must be three partners in space, universities and research institutions on the one hand, the government on the second and industry on the third' (Bondi, 1971, p. 9). On the other hand, outer space still remains firmly within the domain of the state and is likely to do so for the foreseeable future, with the likely continued importance of military uses of satellite technology and the weaponization of Earth’s orbit—crucially, the Outer Space Treaty only prohibits nuclear arms and other ‘weapons of mass destruction' in space, not conventional weapons, such as ballistic missiles. One novel element in this phase of capitalism-in-space is the interrelationship between Silicon Valley, NewSpace, and the state (see, e.g., Vance, 2015). Silicon Valley’s capitalist class, including Amazon’s Jeff Bezos, play an outsize role in NewSpace. Behind and around these figures, however, remains the state—through its weighty fiscal, regulatory, military, and symbolic investments.Footnote15 To take but one example: In June 2018, SpaceX won a $130 million contract with the U.S. Air Force to launch an ‘Air Force Space Command' satellite onboard a Falcon Heavy rocket (Erwin, 2018). Fredric Jameson’s (2003, p. 76) oft-quoted observation that it is easier to imagine the end of humankind than the end of capitalism, is realized in the ideals and operations of capitalistkind. Elon Musk has observed that the goal of SpaceX is to establish humankind as a ‘multiplanetary species with a self-sustaining civilization on another planet' whose purpose is to counteract the possibility of a ‘worst-case scenario happening and extinguishing human consciousness' (Vance, 2015, p. 5). But couldn’t we view this idealistic assertion on behalf of humanity in another way? It is not human consciousness, over and against what the writer Kim Stanley Robinson (2017, p. 2) calls ‘**mineral unconsciousness'** (i.e., the mute, geological reality of the natural universe), so much as a specifically **capitalist consciousness that is at stake**. **While the actions of capitalistkind may primarily be aimed at ensuring the future survival of the human species, an additional result is to ensure that the very idea of capitalism itself will outlive a (distantly) possible extinction event. Capitalism is a self-replicating system, pushing to expand ever outwards, using a territorializing strategy of survival**. As David Harvey notes, ‘a steady rate of growth is essential for the health of a capitalist economic system, since it is only through growth that profits can be assured and the accumulation of capital be sustained' (1990, p. 180). **In this respect, outer space is ideal: it is boundless and infinite. As Earth comes to be blanketed by capital, it is only to be expected that capital should set its sights on the stars above.** The actions of capitalistkind serve to bolster the capitalist mode of production and accumulation: it is not only life but capital itself that must outlive Earth—even into the darkness of space.

#### Private expansion into space is designed to perpetuate the already increasing class divide – built on the back of exploited workers, it seeks only to benefit the rich while leaving the marginalized behind

Paris Marx, socialist writer and host of the left-wing tech podcast Tech Won't Save Us and has a Master’s degree in Geography from McGill University, in 6-08-21 [“Yes to Space Exploration. No to Space Capitalism,” JacobinMag https://jacobinmag.com/2020/06/spacex-elon-musk-jeff-bezos-capitalism]

The space billionaires — Musk and Amazon CEO Jeff Bezos foremost among them — **have little stake** in the well-being of the majority of the population. Their space visions are **designed for wealthy people** like themselves, with little mention of where the working class would fit in. They’ve **built their wealth on exploitation**, and their visions of the future are little more than an extension of their present actions. A History of Violence The business practices of Musk and Bezos are increasingly well known and have been on clear display during the pandemic. Musk tried to claim Tesla’s Fremont, California factory was “essential” until authorities forced him to close it; then he reopened it in defiance of health orders. As Tesla CEO, Musk has a long history of **opposing the unionization of workers**, presiding over a high rate of worker injuries (which the company tried to cover up), and even having a former worker hacked and harassed after he became a whistleblower. Meanwhile, Bezos has a similar history of **abusing Amazon workers.** Amazon’s warehouses are known for having higher injury rates than the industry average, the company has fought unionization, and the stories of the terrible conditions experienced by workers are legendary. During the pandemic, that has continued, with the company failing to enforce social distancing or provide adequate protective equipment until workers began walking out, refusing to be open about infection information, and firing workers who dared criticize the company, all while Bezos’s wealth has increased by more than $30 billion. But it goes beyond that, because the worldviews of these billionaires began to be formed long before they started the empires they currently lord over. Musk did not have a regular childhood, but rather a wealthy upbringing in apartheid South Africa. His father was an engineer and owned part of an emerald mine in Zambia, telling Business Insider, “We were very wealthy. We had so much money at times we couldn’t even close our safe.” In Elon Musk: Tesla, SpaceX, and the Quest for a Fantastic Future, Ashlee Vance describes how Musk got money from his father when he was starting one of his original ventures. He also had a particular admiration for his grandfather, who moved to apartheid South Africa from Canada after rallying “against government interference in the lives of individuals.” Bezos has a not dissimilar story. His father was a well-off oil engineer in Cuba while Fulgencio Batista was in power. In Bit Tyrants, Rob Larson explains that Bezos’s father left the island after the Cuban Revolution and passed his libertarian views down to his son. Bezos’s parents invested nearly $250,000 in Amazon in 1995 as it was getting started. These space barons made their **billions through the exploitation of their workers** and came from well-off backgrounds made possible from resource extraction. When digging into their visions for a future in space, it’s clear that they **seek to extend these conditions into the cosmos**, not challenge them in favor of space exploration for the benefit of all. The Future They Want Musk and Bezos are the leading drivers of the modern push to privatize and colonize space through their respective companies, SpaceX and Blue Origin. Their visions differ slightly, with Musk preferring to colonize Mars, while Bezos has more interest in building space colonies in orbit. In 2016, Musk claimed he would begin sending rockets to Mars in 2018. That never happened, but it hasn’t ended his obsession. Musk is determined to make humans a multi-planetary species, framing our choice as either space colonization or the risk of extinction. Bezos says that Earth is the best planet in our solar system, but if we don’t colonize space we doom ourselves to “stasis and rationing.” These framings serve the interests of these billionaires, and make it seem like **colonizing space** is an obvious and necessary choice when it isn’t. It **ignores their personal culpability and the role of the capitalist system they seek to reproduce in causing the problems they say we need to flee in the first place.** Billionaires have a much greater carbon footprint than ordinary people, with Musk flying his private jet all around the world as he claims to be an environmental champion. Amazon, meanwhile, is courting oil and gas companies with cloud services to make their business more efficient, and Tesla is selling a false vision of sustainability that purposely serves people like Musk, all while capitalism continues to drive the climate system toward the cliff edge. **Colonizing space will not save us from billionaire-fueled climate dystopia.** But these billionaires do not hide who would be served by their futures. Musk has given many figures for the cost of a ticket to Mars, but they’re never cheap. He told Vance the tickets would cost $500,000 to $1 million, a price at which he thinks “it’s highly likely that there will be a self-sustaining Martian colony.” However, the workers for such a colony clearly won’t be able to buy their own way. Rather, Musk tweeted a plan for Martian indentured servitude where workers would take on loans to pay for their tickets and pay them off later because “There will be a lot of jobs on Mars!” Bezos is even more open about how the workforce will have to expand to serve his vision, but has little to say about what they’ll be doing. His plan to maintain economic “growth and dynamism” requires the human population to grow to a trillion people. He claims this would create “a thousand Mozarts and a thousand Einsteins” who would live in space colonies that are supposed to house a million people each, with the surface of Earth being mainly for tourism. Meanwhile, industrial and mining work would move into orbit so as not to pollute the planet, and while he doesn’t explicitly acknowledge it, it’s likely that’s where you’ll find many of those trillion workers toiling for their space overlord and his descendants. Space Shouldn’t Serve Capitalists In 1978, Murray Bookchin skewered a certain brand of futurism that sought to “extend the present into the future” and desired “multinational corporations to become multi-cosmic corporations.” **Much of this future thinking obsesses about possible changes to technology, but seeks to preserve the existing social and economic relations — “the present as it exists today, projected, one hundred years from now,”** as Bookchin put it. That’s at the core of the space billionaires’ vision for the future. Space has been used by past US presidents to bolster American power and influence, but it was largely accepted that capitalism ended at the edge of the atmosphere. That’s no longer the case, and just as past capitalist expansions have come at the expense of poor and working people to enrich a small elite, so too will this one. Bezos and Trump may have a public feud, but that doesn’t mean that their mutual interest isn’t served by a renewed US push into space that funnels massive public funds into private pockets and seeks to open celestial bodies to capitalist resource extraction. This is not to say that we need to halt space exploration. The collective interest of humanity is served by learning more about the solar system and the universe beyond, but the goal of such missions must be driven by gaining scientific knowledge and enhancing global cooperation, not nationalism and profit-making. Yet that’s exactly what the space billionaires and American authoritarians have found common cause in, with Trump declaring that “a new age of American ambition has now begun” at a NASA press briefing just hours before cities across the country were placed under curfew last week. Before space can be explored in a way that benefits all of humankind, existing social relations must be transformed, not extended into the stars as part of a new colonial project.

#### The colonization of outer space is not a quest for universal salvation but rather a method of expanding the capitalist colonial project, with the purpose of distracting humanity from the current issues of warming in the squo and justifying endless violence against the other

Jens Temmen, assistant professor for American Literature and Culture at Heinrich-Heine University Düsseldorf (Germany), in 7-14-21 [“Why Billionares in Space are not going to make the world a better place,” Degruyter,<https://blog.degruyter.com/today-space-is-virgin-territory-why-billionaires-in-space-are-not-going-to-make-the-world-a-better-place/>]

The **private space races of billionaires** like Richard Branson, Elon Musk and Jeff Bezos are staged as humanity‘s ticket to progress, transformation, and even immortality in outer space. The **colonial rhetoric** that continues to **accompany this new industry,** however, is a reminder that their plans are neither altruistic visions nor merely harmless pet projects of the super-rich. On July 11th 2021, Virgin Galactic founder, billionaire and self-declared new space tourism pioneer Richard Branson staged the first commercial flight of his company’s supersonic space-plane Unity – with Branson aboard himself and thus upstaging Amazon founder Jeff Bezos‘ own flight by just a few days. Virgin Galactic lauded the perfectly orchestrated performance as following the path of the Apollo missions, while also heralding a new and invigorated phase of space exploration – this time with commercial flights and space tourism leading the way. Branson and the other so-called New Space Entrepreneurs, Elon Musk and Jeff Bezos, might be competitors in their private race to space, yet all of them are deeply invested in surrounding their private enterprises with a shared narrative of a utopian future for humanity in outer space, and even as much as humanity‘s survival in face of climate change on Earth, by way of becoming a multiplanetary species. For the most part that story isn’t new, of course. The idea that entering and colonizing outer space provides a unifying experience for humanity has been popularized by science-fiction for quite a while now – a tune that many planetary scientists, by the way, have happily sung along with. What has changed is that in the latest version of that popular narrative, the only path leading towards utopia goes through a privatized space industry. Yet in spite of allegedly pointing the way into a better, more just, and more sustainable future for humanity, **most of these imaginaries tend to wrap their visions into the rather stale and very earthly language of discovery and exploration, of new frontiers, terra nullius (“nobody’s land“), and of colonization** – **imageries and terms which have and continue to justify removal, extraction, exploitation and genocide. T**he billionaires’ space race is no exception to that rule: the quote that marked Branson’s entry into sub-orbital height – “Today space is Virgin territory“ – is not just a clever pun on the company’s name, but also revealingly invokes the misogynist and colonial notions of “untouched“ land and people that are ready for the taking. These notions have served Euro-American empires for centuries as justification for brutally claiming new territories and racially hierarchizing their population. But what’s the harm, one might ask, in rehashing these concepts in context of the exploration of outer space? With no Indigenous population (that we know of) that can be removed, no pre-colonial civilization in the way of Earth’s future colonies on Moon and Mars, isn’t space colonialism something truly new, completely divorced from the history of terrestrial colonialism? Branson, Musk and Bezos would most certainly agree. The question ignores the fact that contrary to what the private space industry (and national space agencies, for that matter) wants us to believe, the exploration and colonization of outer space is a very **terrestrial undertaking**. **Steeped in capitalism** – a system that **Branson, Musk and Bezos** have **mastered and thrived** in – and the geopolitical stratagems of Earth’s nation-states, space exploration today is not so much driven by changing humanity as it goes into space, but rather by changing outer space to make it **fit into the logics of profit and territorial control on Earth**. And we are in the thick of it: Branson’s latest attempt to establish space travel as a new branch of the tourism industry is just one of many recent steps – including the establishment of US Space Force, the ratification of the Artemis Accords, and the signing on of Musk’s SpaceX as a contractor for NASA – to make outer space safe for capitalism. The point of the performative character of the billionaires’ space race, the images of grandeur and individualism, the bells and whistles, its alleged subscription to a more just future for humanity, is to **distract**, then. It is a shiny packaging that wraps-up and obscures the mundane fact that **if colonizing outer space is allegedly about fundamentally changing societally structures that govern Earth and humanity, the New Space Entrepreneurs are certainly not the ones to bring about that change – it would simply be against their self-interest**. “**Their vision of humanity in space is designed for the few and wealthy, and built on the back of the many.”** In Earth’s past and present, the colonial language of virgin land and terra nullius served to obscure the human cost of colonization by dehumanizing colonized peoples. Space exploration, as imagined by Branson, Musk and Bezos, also has a cost. The wealth that all three of them have acquired through their business ventures, which puts them into the position to reach for the stars (and greater profits), **builds on unleashed neoliberalism, capitalist exploitation, and, overall, less-than altruistic business models**. Their vision of humanity in space is **likewise designed for the few and wealthy, and built on the back of the many**. And the cost could increase even further. While all of humanity is facing the unprecedented threat of climate change, which urges us to find sustainable solutions fast, Elon **Musk and others offer us the seemingly quick fix of abandoning Earth altogether and to weather out the storm on Mars** In spite of being **completely unfeasible** from a scientific standpoint, the idea has still gained traction among technoliberalists, and is thus. **withdrawing attention and resources from communities** mostly in the Global South for whom climate change is not a threat in the distant future. In addition, the noise and smoke created by the hyper-masculine performances of Branson, Musk and Bezos block our view of the tangible benefits that space exploration has to offer and that we should readily invest in. Current Mars exploration projects, for example, offer insights into how atmospheric changes impact planetary climates – information that could prove invaluable in our battle against climate change on Earth. All of this is a reminder that we should not abandon the idea altogether that space exploration can offer us new and vital insights. Space exploration is, however, not going to magically change humanity or how we live. If we want to continue to hope that space exploration will fulfill the promise of a better future for humanity, changing our perspectives on life on Earth must come first.

#### Absent a psychic evaluation of capitalism extinction from ecological destruction is inevitable—independently turns and outweighs the neg

Alexander Dunlap 20, Centre for Development and the Environment, University of Oslo, Norway, “A faultline in neoliberal environmental governance scholarship? Or, why accumulation-by-alienation matters,” Environment and Planning E: Nature and Space, 3.2, https://doi.org/10.1177/2514848619874691

While ‘accumulation-by-alienation’ might retain a multiplicity of meanings, we find the specific concept relational deficiency potent for understanding the fragmentation, atomization and narcissistic individualism that many commentators understand to be sovereign in the neoliberal era (Harvey, 2018; Hedges, 2010; Houllebecq, 2001). Psychologist Bruce Alexander (2008) reminds us that ‘[a]long with its dazzling benefits, the global movement towards free-market society has costs, one of which is the destruction of psychosocial integration’ (61). Ecopsychology, together with ecophilosophy and phenomenology approaches to human experience, specifies that psychological disintegration arising in connection with the commodity form is also ecological in nature (see Evernden, 1985; Roszak, 2002). Psychological integration thereby implies recognition of the virtues of ecological dependence (Hannis, 2016) to extend human relational and reciprocal practices to include natures-beyond-the-human (Hannis and Sullivan, 2018). The entanglement of alienation with commodification, as well as with the objectifications and quantifications on which commodification rests, thereby for us makes objectification, measurement and commodification strange tools with which to counter socio-ecological breakdown caused by alienation in its multiple dimensions. In invoking ‘accumulation-by alienation’ as at the heart of neoliberal environmental governance approaches and primitive accumulation/accumulation-by-dispossession, we are thus drawing attention to the ways that the metrics and commodity fetishisms built into PES, REDDþ and offsetting (McElwee, 2017; Sullivan and Hannis, 2017; Turnhout et al., 2014) can further naturalize habits, attitudes and perspectives that alienate people from natures-beyond-the-human, as well as from each other. This recognition that a practice of splitting so as to create and release value is central to capitalist enterprise (cf. Robertson, 2011) takes us to the reasons why PES, REDDþ and offsetting are contentious and paradoxical as methods for healing the socio-ecological alienations and disintegrations generated by this enterprise. This same recognition also brings us to the reasons why these alienated responses are so core to technologies of environmental governance conceived in terms of maintaining, rather than resisting, the momentum of state territorialization and capital accumulation defining mercantile expansion and capture, from the 1400s to today. Conclusion As scholars we are, of course, also enmeshed in the alienations we invoke above, particularly given the industrialized environments in which we work (Freund and Martin, 2007; Rodgers and O’Neill, 2012), the social and infrastructural conditioning of subjectivities from which academics are not immune (Auge´, 2008 [1995]; Dalakoglou and Harvey, 2012; Foucault, 2007, 2008; Gabrys, 2014; Harvey et al., 2017) and the relentless neoliberal restructuring pressuring academic labour and engagement (Lave, 2012). In understanding and analysing the extension of industrial economy through neoliberal governance mechanisms such as PES, REDDþ and offsetting, we thus also need to understand the effects of the alienating structures of production we inhabit on our own patterns of thinking and engagement with research contexts. In this paper, we have provided a brief review of recent debates regarding PES, REDDþ and carbon-BDO as forms of neoliberal environmental governance, highlighting superficial differences and structural similarities between these governance technologies. With Harvey (2018) we want to go further, however, in stressing that at the core of ecological and climate crisis is a profound alienation and splitting from eco-social relational contexts, and that it is this disconnection that underlies the variable abstraction of economic value from ecosystems in neoliberal environmental governance. As noted above, therefore, we find PES, REDDþ and offsetting technologies to be strange tools for countering socio-ecological breakdown. This is because these technologies similarly abstract and extract value from ecosystems, and thereby deepen – rather than refract – the alienations underpinning this breakdown. The implications, we think, are twofold. First, as researchers and practitioners both within and beyond academia we need to consider the ways we are deeply influenced by industrial capitalism, especially as this relate to our own desires – or ‘ghosts of desire’ thinking of William Blake (1994 [1790–93]) – in relation to visions of socio-ecological health (also Burman, 2017; Nirmal and Rocheleau, 2019; Sullivan, 2017c, 2019b). Second, we maintain that PES, REDDþ and offsetting scholars might more openly reject these governance technologies, rather than trying to improve them. Other avenues exist for research that observe, participate in and actively develop alternatives to state sanctioned market-based conservation. These might include turning ‘ecosystem services’ and ‘natural capital’ conceptualizations, objectifications and instrumentalizations on their heads, for example through ideas and practices of ‘serving nature’ (Sullivan, 2009); ‘living with’ diverse natures (Turnhout et al., 2013) as multi- and inter-species assemblages (Dransart, 2013); ‘convivial conservation’ (Bu¨scher, 2014; Bu¨scher and Fletcher, 2019); conscious strategies towards economic ‘de-growth’ (D’Ailsa et al., 2014; Kallis, 2018) and advancing 18 ENE: Nature and Space 0(0) post-development alternatives in general (Escobar, 2015; Kothari et al., 2019; Nirmal and Rocheleau, 2019). Consolidating struggles ‘in the field of realisation rather than production’, as Harvey (2018: 146) puts it. Such approaches might require desisting from measuring and making legible ‘ecosystem services’ so as to gain more reliable data to perfect ecosystem marketization, compensation reward schemes and the like, and thus refusing to be accomplices to neoliberal environmental governance as an extension of historically rooted ecological conquest. Our closing invocation, then, is for solidarity in pushing back against ‘capitalist valuation’, through combining our own alienated labours towards deeper contestation of the alienating accumulation structures effected through neoliberal environmental governance.

#### Climate Change causes mass starvation, resource conflicts, and civilizational collapse— interconnected feedback loops create an exponential increase in the number and magnitude of impacts of climate change – that means mass suffering and extinction.

Peter Kareiva and Valerie Carranza, Director of the Institute of the Environment and Sustainability at UCLA & Pritzker Distinguished Professor in Environment & Sustainability, in Futures, in 2018 ["Existential risk due to ecosystem collapse: Nature strikes back", https://www.sciencedirect.com/science/article/pii/S0016328717301726, 7-30-2019] AR

In summary, six of the nine proposed planetary boundaries (phosphorous, nitrogen, biodiversity, land use, atmospheric aerosol loading, and chemical pollution) are unlikely to be associated with existential risks. They all correspond to a degraded environment, but in our assessment do not represent existential risks. However, the three remaining boundaries (climate change, global freshwater cycle, and ocean acidification) do pose existential risks. This is because of intrinsic positive feedback loops, substantial lag times between system change and experiencing the consequences of that change, and the fact these different boundaries interact with one another in ways that yield surprises. In addition climate, freshwater, and acidification are all directly connected to the provision of food and water, and shortages of food and water can create conflict and social unrest. Climate change has a long history of disrupting civilizations and sometimes precipitating the collapse of cultures or mass emigrations (McMichael, 2017). For example, the 12th century drought in the North American Southwest is held responsible for the collapse of the Anasazi pueblo culture. More recently, the infamous potato famine of 1846-1849 and the large migration of Irish to the US can be traced to a combination of factors, one of which was climate. Specifically, 1846 was an unusually warm and moist year in Ireland, providing the climatic conditions favorable to the fungus that caused the potato blight. As is so often the case, poor government had a role as well—as the British government forbade the import of grains from outside Britain (imports that could have helped to redress the ravaged potato yields). Climate change intersects with freshwater resources because it is expected to exacerbate drought and water scarcity, as well as flooding. Climate change can even impair water quality because it is associated with heavy rains that overwhelm sewage treatment facilities, or because it results in higher concentrations of pollutants in groundwater as a result of enhanced evaporation and reduced groundwater recharge. Ample clean water is not a luxury – it is essential for human survival. Consequently, cities, regions and nations that lack clean freshwater are vulnerable to social disruption and disease. Finally, ocean acidification is linked to climate change because it is driven by CO2 emissions just as global warming is. With close to 20% of the world’s protein coming from oceans (FAO, 2016), the potential for severe impacts due to acidification is obvious. Less obvious, but perhaps more insidious, is the interaction between climate change and the loss of oyster and coral reefs due to acidification. Acidification is known to interfere with oyster reef building and coral reefs. Climate change also increases storm frequency and severity. Coral reefs and oyster reefs provide protection from storm surge because they reduce wave energy (Spalding et al., 2014). If these reefs are lost due to acidification at the same time as storms become more severe and sea level rises, coastal communities will be exposed to unprecedented storm surge—and may be ravaged by recurrent storms. A key feature of the risk associated with climate change is that mean annual temperature and mean annual rainfall are not the variables of interest. Rather it is extreme episodic events that place nations and entire regions of the world at risk. These extreme events are by definition “rare” (once every hundred years), and changes in their likelihood are challenging to detect because of their rarity, but are exactly the manifestations of climate change that we must get better at anticipating (Diffenbaugh et al., 2017). Society will have a hard time responding to shorter intervals between rare extreme events because in the lifespan of an individual human, a person might experience as few as two or three extreme events. How likely is it that you would notice a change in the interval between events that are separated by decades, especially given that the interval is not regular but varies stochastically? A concrete example of this dilemma can be found in the past and expected future changes in storm-related flooding of New York City. The highly disruptive flooding of New York City associated with Hurricane Sandy represented a flood height that occurred once every 500 years in the 18th century, and that occurs now once every 25 years, but is expected to occur once every 5 years by 2050 (Garner et al, 2017). This change in frequency of extreme floods has profound implications for the measures New York City should take to protect its infrastructure and its population, yet because of the stochastic nature of such events, this shift in flood frequency is an elevated risk that will go unnoticed by most people. 4. The combination of positive feedback loops and societal inertia is fertile ground for global environmental catastrophes Humans are remarkably ingenious, and have adapted to crises throughout their history. Our doom has been repeatedly predicted, only to be averted by innovation (Ridley, 2011). However, the many stories of human ingenuity successfully addressing existential risks such as global famine or extreme air pollution represent environmental challenges that are largely linear, have immediate consequences, and operate without positive feedbacks. For example, the fact that food is in short supply does not increase the rate at which humans consume food—thereby increasing the shortage. Similarly, massive air pollution episodes such as the London fog of 1952 that killed 12,000 people did not make future air pollution events more likely. In fact it was just the opposite—the London fog sent such a clear message that Britain quickly enacted pollution control measures (Stradling, 2016). Food shortages, air pollution, water pollution, etc. send immediate signals to society of harm, which then trigger a negative feedback of society seeking to reduce the harm. In contrast, today’s great environmental crisis of climate change may cause some harm but there are generally long time delays between rising CO2 concentrations and damage to humans. The consequence of these delays are an absence of urgency; thus although 70% of Americans believe global warming is happening, only 40% think it will harm them (http://climatecommunication.yale.edu/visualizations-data/ycom-us-2016/). Secondly, unlike past environmental challenges, the earth’s climate system is rife with positive feedback loops. In particular, as CO2 increases and the climate warms, that very warming can cause more CO2 release which further increases global warming, and then more CO2, and so on. Table 2 summarizes the best documented positive feedback loops for the Earth’s climate system. These feedbacks can be neatly categorized into carbon cycle, biogeochemical, biogeophysical, cloud, ice-albedo, and water vapor feedbacks. As important as it is to understand these feedbacks individually, it is even more essential to study the interactive nature of these feedbacks. Modeling studies show that when interactions among feedback loops are included, uncertainty increases dramatically and there is a heightened potential for perturbations to be magnified (e.g., Cox et al., 2000; Hajima et al., 2014; Knutti & Rugenstein, 2015; Rosenfeld et al., 2014). This produces a wide range of future scenarios. Positive feedbacks in the carbon cycle involves the enhancement of future carbon contributions to the atmosphere due to some initial increase in atmospheric CO2. This happens because as CO2 accumulates, it reduces the efficiency in which oceans and terrestrial ecosystems sequester carbon, which in return feeds back to exacerbate climate change (Friedlingstein et al., 2001). Warming can also increase the rate at which organic matter decays and carbon is released into the atmosphere, thereby causing more warning (Melillo et al, 2017). Increases in food shortages and lack of water is also of major concern when biogeophysical feedback mechanisms perpetuate drought conditions. The underlying mechanism here is that losses in vegetation increases the surface albedo, which suppresses rainfall, and thus enhances future vegetation loss and more suppression of rainfall—thereby initiating or prolonging a drought (Chamey et al., 1975). To top it off, overgrazing depletes the soil, leading to augmented vegetation loss (Anderies et al., 2002). Climate change often also increases the risk of forest fires, as a result of higher temperatures and persistent drought conditions. The expectation is that forest fires will become more frequent and severe with climate warming and drought (Scholze et al., 2006), a trend for which we have already seen evidence (Allen et al., 2010). Tragically, the increased severity and risk of Southern California wildfires recently predicted by climate scientists (Jin et al, 2015), was realized in December 2017, with the largest fire in the history of California (the “Thomas fire” that burned 282,000 acres, https://www.vox.com/2017/12/27/16822180/thomas-fire-californialargest-wildfire ). This catastrophic fire embodies the sorts of positive feedbacks and interacting factors that could catch humanity off-guard and produce a true apocalyptic event. Recordbreaking rains produced an extraordinary flush of new vegetation, that then dried out as record heat waves and dry conditions took hold, coupled with stronger than normal winds, and ignition. Of course the record-fire released CO2 into the atmosphere, thereby contributing to future warming. Out of all types of feedbacks, water vapor and the ice-albedo feedbacks are the most clearly understood mechanisms. Losses in reflective snow and ice cover drive up surface temperatures, leading to even more melting of snow and ice cover—this is known as the ice-albedo feedback (Curry et al., 1995). As snow and ice continue to melt at a more rapid pace, millions of people may be displaced by flooding risks as a consequence of sea level rise near coastal communities (Biermann & Boas, 2010; Myers, 2002; Nicholls et al., 2011). The water vapor feedback operates when warmer atmospheric conditions strengthen the saturation vapor pressure, which creates a warming effect given water vapor’s strong greenhouse gas properties (Manabe & Wetherald, 1967). Global warming tends to increase cloud formation because warmer temperatures lead to more evaporation of water into the atmosphere, and warmer temperature also allows the atmosphere to hold more water. The key question is whether this increase in clouds associated with global warming will result in a positive feedback loop (more warming) or a negative feedback loop (less warming). For decades, scientists have sought to answer this question and understand the net role clouds play in future climate projections (Schneider et al., 2017). Clouds are complex because they both have a cooling (reflecting incoming solar radiation) and warming (absorbing incoming solar radiation) effect (Lashof et al., 1997). The type of cloud, altitude, and optical properties combine to determine how these countervailing effects balance out. Although still under debate, it appears that in most circumstances the cloud feedback is likely positive (Boucher et al., 2013). For example, models and observations show that increasing greenhouse gas concentrations reduces the low-level cloud fraction in the Northeast Pacific at decadal time scales. This then has a positive feedback effect and enhances climate warming since less solar radiation is reflected by the atmosphere (Clement et al., 2009). The key lesson from the long list of potentially positive feedbacks and their interactions is that runaway climate change, and runaway perturbations have to be taken as a serious possibility. Table 2 is just a snapshot of the type of feedbacks that have been identified (see Supplementary Material for a more thorough explanation of positive feedback loops). However, this list is not exhaustive and the possibility of undiscovered positive feedbacks portends even greater existential risks. The many environmental crises humankind has previously averted (famine, ozone depletion, London fog, water pollution, etc.) were averted because of political will based on solid scientific understanding. We cannot count on complete scientific understanding when it comes to positive feedback loops and climate change. 5. It is multiplicative stresses (or “double whammies”) that should be our greatest concern It is easy to see how positive feedback loops exacerbate existential risks. A second, but less obvious danger is the linkage of seemingly unrelated processes or phenomenon that increase risk. A good example is wildfires and tornadoes. Both of these represent natural disasters that can cause great damage. Until recently no one linked these two phenomena, and no one would have imagined that an increase in wildfires might cause an increase in tornados. However, researchers in 2016 documented a linkage between wildfires in Central America and the worst episode of tornadoes in North America’s recorded history (Saide et al., 2016)—more than 120 twisters in one day, which killed 316 people. The mechanism is that the aerosol particles produced by wildfires increase the vertical sheer in atmospheric wind speeds, which in turn makes tornadoes more likely and more severe. While tornadoes and wildfires are both local there are other trends that are national or even global that entail interacting risks factors—or what the renowned ecologist Robert T. Paine called a “double whammy” (Paine, 1993). Paine makes the argument that whereas one perturbation or stress on its own might not be terribly worrisome, if an ecosystem is hit with two stresses or threats at the same time (or in quick succession) the result can be surprisingly catastrophic. For example, aging infrastructure in the United States (dams, bridges, levees, etc.) is often talked about as a disaster waiting to happen (Reid, 2008). Similarly, increased extreme rainfall is widely appreciated as a likely outcome of climate change. Putting the two together, we have a recipe for turning improbable events into something that should be expected. A specific example of what was once a highly unlikely tragedy, but is now perhaps a probable disaster is the failure of a large dam. If large aging dams fail due to the combination of decaying infrastructure and unprecedented rainfall, downstream communities could be destroyed. Existing dams were engineered for flood frequencies and rainfall regimes that have been replaced by much more extreme weather events. This should raise general concerns about flood-safety. Not only are the designs for major dams obsolete due to climate changes, the dams themselves are obsolete. In the United States alone, more than 85% of large dams will be more than 50 years old by 2020 (Hossain et al., 2009). Based on data from the National Performance of Dam Failures, the top ten causes of dam incidents in the United States are depicted in Fig. 2a. The most frequent type of incident was attributed to inflow floods—that is more than 1000 dam failures. The reason this is a global concern is that observations (Fig. 2b) in dry and wet regions all over the world show that extreme precipitation events have been increasing since the 1950s (Donat et al., 2017). The combined effect of intensified rainfall and old dams pose a clear risk to communities worldwide. California, which has used dams and reservoirs to store water on a massive scale, recently suffered through several consecutive years of both low rainfall and high temperatures that produced a 5-year record-breaking drought (Diffenbaugh et al., 2015). The drought ended when the state experienced massive amounts of precipitation in early 2017 leading to its wettest rainy season, on record (Vahedifard et al., 2017). The rainfall unleashed floods, landslides, and nearly collapsed the Oroville Dam, the tallest dam in North America. The tremendous water flows severely damaged the dam’s spillways, prompting the evacuation of about 190,000 people downriver of the dam (Park & Mclaughlin, 2017). This particular crisis is an example of how the intersection of climate change and infrastructure that is either aging or that was designed for different conditions can potentially lead to a catastrophe (Vahedifard et al., 2017). With the likelihood of more frequent extreme events in the future, situations like the one experienced at the Oroville Dam will become more common. The intersection of climate change and human activity is also elevating the risk of severe wildfires in large portions of the world. Models suggest that precipitation was the primary driver behind global fire regimes during the preindustrial era, and then shifted towards an anthropogenicdriven regime during the industrial period (Pechony & Shindell, 2010). Now it appears that temperature will play a strong role in the 21st century in global wildfires (Pechony & Shindell, 2010). The combination of increasing temperatures at the global scale with increased propensity of wildfires due to human activity at the local level, could lead to massive infernos (Bonan, 2008). Wildfire severity and frequency will be dramatically increased wherever the mean temperature in a region increases by 3°C or more; unfortunately, in the Sahel, central Australia, central Asia, southern Africa, the western U.S., and in most of South America, warming is indeed expected to exceed 3°C (Scholze et al., 2006). This is a global threat. Sometimes there is irony in the way stresses combine to produce a catastrophe. Humans have adapted to heat waves by installing air conditioning. The combination of a heat wave, with increased demands for irrigation and air conditioning led to the largest ever power outage in India during 2012. Over 600 million were left without electricity and without air conditioning to mitigate the heat wave (Lundgren & Kjellstrom, 2013). Hospitals lost power and cities shut down. While it is possible to improve on the design of electric grids to reduce such massive outages (Fang, 2014), it is clear that the combination of extreme climate events and how humans respond to those heat waves has led to several massive power outages around the world (Klinger & Landeg, 2014). The irony is that air conditioning is an adaption to heat—and the adoption of air conditioning routinely saves lives (Barreca et al., 2016). But the adaptation that saves human lives can overburden an electric grid and make it much more susceptible to failure. Again it is the interconnections of stresses and the way we respond to environmental shocks that promulgates the greatest existential risk.

#### **No decoupling- thousands of studies**

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6. Green growth is not a thing Milanovic believes that technology will come to our rescue, and make growth “green”. Unfortunately there is a strong consensus against this assumption. We have reviewed the relevant empirical evidence here (“Is green growth possible?”), examining both CO2 emissions and resource use. Briefly, about CO2, the question is not whether GDP can be decoupled from emissions (we know that it can be), the question is whether this can be done fast enough to stay within safe carbon budgets while growing GDP at the same time. And the answer to this is no. More growth entails more energy use, and more energy use makes it all the more difficult to cover that demand with renewables. The only scenarios that succeed in reducing emissions fast enough to keep us under 1.5 or 2C involve a reduction in resource and energy use (in other words, degrowth). I discuss this in more depth here. This 2020 review examines 835 empirical studies and finds that decoupling alone is not adequate to achieve climate goals; it requires what the authors themselves refer to as “degrowth” scenarios. This paper in Nature Sustainability comes to similar conclusions. As for resources: resource use continues to rise along with GDP (despite significant efficiency improvements, and a significant shift to services and knowledge as share of GDP), and indeed all existing models indicate that absolute decoupling is unlikely to happen, even under strong policy conditions. See here and here for more. Ward et al (2016) find that even the most optimistic projections of efficiency improvements yield no absolute decoupling in the medium and long term. The authors state: “this result is a robust rebuttal to the claim of absolute decoupling”; “decoupling of GDP growth from resource use, whether relative or absolute, is at best only temporary. Permanent decoupling (absolute or relative) is impossible… because the efficiency gains are ultimately governed by physical limits.” Schandl et al (2016) find the same thing. Even in their best-case scenario projection, global material consumption still grows steadily. The authors conclude: “Our research shows that while some relative decoupling can be achieved in some scenarios, none would lead to an absolute reduction in energy or materials footprint.” Our review was published in 2019, and the literature on this has grown since: i.e., here and here… the latter paper reviews 179 studies on decoupling published since 1990 and finds “no evidence of economy-wide, national or international absolute resource decoupling, and no evidence of the kind of decoupling needed for ecological sustainability.” Here is a 2020 meta-analysis of all available data on GDP and resource use, which comes to the same conclusion.

#### Cap is the root cause of conflict – empirics prove

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Following the framework set out at the beginning of this book, the purpose of this chapter is to deliver a historical materialist perspective on the internal relationship of the state and geopolitics through an analysis of u.s. imperium in relation to the Iraq War. To recap, the argument in Chapter 1 detailed the philosophy of internal relations that distinctively marks historical materialism as a theory of history. Summarily put, the dialectical emphasis of historical materialism stresses the priority of the internal relationship of content and form where generative processes of capital formation are prioritised rather than different moments (events, things or entities) (Harvey, 1996: 74–5). This means two things in relation to the argument of this chapter. First, in developing an account of Global War through the Iraq War it is important from a historical materialist perspective to internally relate geopolitics to processes of capital accumulation in order to analyse the dynamics underlying the invasion. Referring back to the need for a necessarily historical materialist moment in international theory, this means highlighting the content of the form of the geopolitics of global war or how both state geopolitical and **capital formation dynamics underpin the material practices and discursive modes of political economic power**. Second, as David Harvey (1996: 269) argues, ‘any recourse to a philosophy of dialectics or internal relations leads, either explicitly or implicitly, to a relational view on space and time.’ In the context of the empirical interventions of Part III of this book, this means drawing on the postholing method (introduced in Chapter 1) in order to relate the sweep of historical forces of Global Capitalism, Global War, Global Crisis to the specificity and richness of detail of the ‘new imperialism’ in Iraq. As Marx (1857–8/1973: 408) stated in the Grundrisse, ‘the tendency to create the world market is directly given in the concept of capital itself. Every limit appears as a barrier to be overcome.’ Hence an examination of ‘new imperialism’ on the basis of the method of postholing in this chapter in order to assess how the barriers to the expansion of capitalist production were overcome through Global War in Iraq. This then enables a focus on conditions of Global Crisis in Chapter 9 with the aim of understanding the **uneven and combined developmental contradictions** currently existing within contemporary capitalism. The argument in this chapter proceeds by engaging with classical Marxist debates on imperialism between the perspectives on interimperialist rivalries (Lenin, Bukharin) and ultra-imperialism (Kautsky). This analysis is then linked to a discussion of key contemporary examples of authors pursuing these different lines of thinking. After all, imperialism is ‘a rather loose concept which in practice has to be newly defined with reference to each historical period’ (Cox, 1981: 142). The first section thus links the classic analyses of world capitalist expansion, war, conflict and imperialism by V. I. Lenin and Nikolai Bukharin to the work of Alex Callinicos and his focus on renewed inter-imperialist rivalry, in which the United States is seen as wanting to secure its access to and control over Middle East oil in relation to intensifying competition with China and other capitalist powers. The second section stretches the focus on contemporary reflections on geopolitics organised through inter-imperialist alliances to the work by Leo Panitch and Sam Gindin as well as Ray Kiely and how this relates back to Karl Kautsky’s notion of ultra-imperialism. Here, the United States as the hegemonic power is assumed to lead other 190 Part III: **Empirical Interventions** terms of use, capitalist states in the reorganisation of the global economy. Ultimately, it is argued that both sets of approaches only examine the external relations between the separate but linked logics of state geopolitics and capital. The third section, in turn, critically analyses William Robinson’s contemporary work on the emergence of a transnational state (tns) and how this results in an analysis of the Iraq War, which overlooks the continuing importance of state forms as nodal points in the organisation of global capitalism, building on our engagement in Chapter 5. In the fourth and fifth sections, we develop an alternative approach to understanding capitalist expansion. In line with earlier discussions of structure and agency in Chapter 2, we first conceptualise the structuring conditions of capitalist expansion in line with Rosa Luxemburg’s spatial account of the accumulation of capital and expansion into non-capitalist spaces through ongoing processes of primitive accumulation, detailed in Chapter 4. Our argument emphasises how the political expression of the expansion and extension of capital proceeds in terms of the geopolitical spatial organisation of capital’s violence. In the instance of the Iraq War, the spatial organisation and geographical expansion of the accumulation process is established through the contemporary power of the United States within which and through which national and transnational capital operate. Hence, drawing on our conceptualisation of the internal relations between the interstate system and global capitalism and the related focus on struggles over the internalisation of transnational capital’s interests in national forms of state as developed in Chapter 5, in the fifth section we move then to the analysis of agency and in particular the processes of class struggle within the u.s. form of state and how they are related to wider struggles over spaces of imperialism and the invasion of Iraq in 2003. This then furthers our overall argument within this book that historical materialism distinctively delivers an assessment of the internal relations of Global Capitalism, Global War, Global Crisis to establish a necessarily historical materialist position or moment within international theory. At the centre of Lenin’s Imperialism: The Highest Stage of Capitalism was a focus on the export of capital as the typical feature of modern imperialism. This itself was embedded in conditions of uneven development between economically ‘advanced’ and ‘backward’ countries. As a result, three essential features can be traced marking this account of the expansion of capitalist imperialism. First, despite capitalism’s expansion a world scale, **inherent divisions remain.** ‘However strong the process of levelling the world, of levelling the economic and living conditions in different countries’, states Lenin (1916/1964: 259), ‘considerable differences still remain.’ Second, added to this, is the hint of a **territorialist logic to the expansion of capitalism**. There is ‘the inevitable striving of finance capital to extend its economic territory and even its territory in general’ (Lenin, 1916/1964: 83). The expansion of finance capital therefore **heightens the unevenness and contradictions** inherent in the world economy and reinforces the territorial division of the world. Third, inter**imperialist rivalries and the spatial expansion of capitalism** are extended through **bellicose geopolitical relations on a world scale**. ‘The question is: what means other than war could there be under capitalism to overcome the disparity between the development of productive forces and the accumulation of capital on the one side, and the division of colonies and spheres of influence for finance capital on the other?’ (Lenin, 1916/1964: 275–6). For Bukharin, there is an **anarchic structure** of world capitalism that finds expression in constant capitalist competition **despite the growth of economic interdependence**. The anarchic character of capitalist society is expressed in the fact that social economy is **not an organised collective body** guided by a single will, but a system of economies interconnected through exchange, each of which produces at its own risk, never being in a position to adapt itself more or less to the volume of social demand and to the production carried on in other individual economies. This calls forth a struggle of the economies against each other, a war of capitalist competition. (Bukharin, 1917/1929: 115) This anarchic structure of the world economy expresses itself in two facts: **capitalist crises and the perpetuation of wars. ‘War in capitalist society is only one of the methods of capitalist competition, when the latter extends to the sphere of world economy’** (Bukharin 1917/1929: 54). Capital is described as a horror vacui. ‘**It rushes to fill every “vacuum”, whether in a “tropical”, “sub-tropical”, or “polar” region’**(Bukharin, 1917/1929: 58). Within the anarchical structure of capitalist competition, war is clearly heralded as the **chief means in the reproduction of relations** of production for imperialist interests. Following a period of conflict, the role of fixed capital formation is signalled as pivotal in increasing the growth of centralisation and concentration of capital accumulation. This is described as a ‘feverish process of healing the wounds’ of war, through the reconstruction of railways, factory plants, machinery, transportation hubs, allied with the expansion of the military, the extending of state power and the centralisation of finance capital (Bukharin, 1917/1929: 149). In vernacular terminology we define this process as a strategy of Bomb-and-Build through which capitalism expands, combining extensive processes of geographical expansion (spreading over territories) and intensive processes of spatial concentration (deepening conditions of exploitation). As a result, ‘capitalist society is whirling in the mad hurricane of world wars’ (Bukharin, 1917/1929: 158). To a large degree, Alex Callinicos extends these insights to argue that **capitalist imperialism should be understood as the intersection of economic and geopolitical competition.** ‘Conceiving imperialism as the intersection of two logics of power or forms of competition avoids economic reductionism’(Callinicos, 2009: 72). He thus identifies‘two logics **of power, capitalistic and territorial, or two forms of competition, economic and geopolitical’** (Callinicos, 2009: 74).1 **The international states system is thereby treated as a dimension of the capitalist mode of production.** From the outset, Callinicos attempts to distance himself from (neo) realist accounts in international relations (ir) (Callinicos 2009: 83). Nevertheless, as already demonstrated in Chapter 5, this understanding of the states system as a distinct determination with its own logic of geopolitical competition still implies a rather state-centric focus, especially when analysing developments in international politics. ‘One implication of this point is that there is, necessarily, a realist moment in any Marxist analysis of international relations and conjunctures: in other words, any such analysis must take into account the strategies, calculations and interactions of rival political elites in the state system’ (Callinicos, 2010a: 21). This conceptual position also has implications for Callinicos’ empirical analysis of developments in the global economy. Despite globalisation, various national capitals remain dependent on the support of their specific state. ‘Capitals involved in increasingly global networks of trade and investment depend on different forms of support, ranging from tariff and subsidy to the assertion of military power, from their nation-state’ (Callinicos, 2005: 2). At the international level, this results, then, in competition of a plurality of major capitalist states, each defending the interests of its particular national capitalist class. Related to the war in Iraq, the u.s. position in favour of invasion is then understood as a way of asserting its dominance vis-à-vis other capitalist rivals, be they in Western Europe or among emerging economies such as China. ‘Seizing Iraq would not simply remove a regime long obnoxious to the u.s., but would both serve as a warning to all states of the costs of defying American military power and, by entrenching this power in the Middle East, give Washington control of what Harvey calls “the global oil spigot” on which potential challengers in Europe and East Asia are particularly dependent’ (Callinicos, 2005: 7; Harvey, 2003b: 25)

#### Err aff, Capitalist literature production is strongly incentivized, biased, and politically agenda based

Louise Morley, Center for Higher Education and Equity Research @ University of Sussex, in Journal of Education Policy, in 2016 ["Troubling intra-actions: gender, neo-liberalism and research in the global academy", http://www.tandfonline.com/doi/full/10.1080/02680939.2015.1062919, 10-4-2017] AR

I have argued that research and researcher identities are being constructed and reinforced via the optics and apparatus of neo-liberalism. Research capital is a key performance indicator and co-constitutes reputation, power, status, rewards, and continued employment. Individual academic identities materialise through intraactions between research policy discourses, performance and productivity within the confines of key performance indicators. Insecurity, inequality and individualisation are fostered as part of ensuring the conditions for power to exercise a hold over conduct (Lazzarato 2009). In the neo-liberalised research economy, risk is redistributed, as academics are made to feel indebted to their organisations and responsibilised for generating income in financial systems over which they have little or no control. What is valued in research and scholarship is increasingly being shaped by market demands. Income generation, enterprise, impact, innovation for the market and the exchange value in the global prestige economy are dominant indicators of the value of research. Productivity and quality are connected and classified according to financial returns and the predictability of research utility. Knowledge production, custody and dissemination processes purport to be neutral and objective, but overlap with social and policy hierarchies. The knowledge economy is invested, situated, exclusionary and embodied, and as such, infused with power and control. The empty signifier of excellence is frequently invoked, yet value indicators can be unstable, transitory, contingent, contextualised and highly gendered. The knowledge economy is driven by the materialities of financialisation, but also by a powerful psychic and affective economy of shame, pride, humiliation, anger, disappointment, despair and anxiety. This represents a type of emotional geography (Kenway and Youdell 2011), with academic identities formed and evaluated in relation to mutable and constructed differences and boundaries. Affect, as Barad might say, is a phenomenon. It is not a stand-alone thing in the world as such things do not exist. It is a term called forth through a relationship with an apparatus (Rutherford 2013). The evaluative gaze of the neo-liberal research economy is the apparatus that can provoke such a powerful affective range.

#### Rule of capital produces structurally violent outcomes - it forces social inequality and economic alienation wherein millions basic needs are unfulfilled

**Sethness 13** (“Javier Sethness is a libertarian socialist and health care provider, author of Imperiled Life: Revolution Against Climate Catastrophe, For a Free Nature: Critical Theory, Social Ecology, and Post-Developmentalism, and Eros and Revolution: The Critical Philosophy of Herbert Marcuse. Javier’s essays and articles have appeared in a number of radical publications.” -Truthout.com, "The Structural Genocide That Is Capitalism," Truthout, 6-16-2013, <https://truthout.org/articles/the-structural-genocide-that-is-capitalism/>) -qcl

Garry Leech, an author who had previously penned a book on the FARC insurgency in Colombia (2011), has assembled a forceful denunciation of the status quo with Capitalism: A Structural Genocide. In essence, he argues cogently in this work that the devastating structural violence experienced by societies subjected to the rule of capital since its historical emergence – and that particularly felt by the world’s presently impoverished social majorities – is, instead of being an aberration or distortion of market imperatives, central and inherent to the division of society along class lines and the enthronement of private property. Even a cursory examination of the depth of human suffering perpetuated historically and contemporarily by the hegemony of capital should lead disinterested observers to agree with Leech that the catastrophic scale of violence for which this system is responsible can be considered nothing less than genocidal, however shocking such a conclusion might prove to be. In this book, Leech guides his readers through theoretical examinations of the concept of genocide, showing why the term should in fact be applied to the capitalist mode of production. He then illustrates capitalism’s genocidal proclivities by exploring four case studies: the ongoing legacy of the 1994 North American Free Trade Agreement (NAFTA) in Mexico; the relationship between trade liberalization and genetically-modified seeds on the one hand and mass-suicide on the part of Indian agriculturalists on the other; material deprivation and generalized premature death throughout much of the African continent and the global South, as results from hunger, starvation, and preventable disease; and the ever-worsening climatic and environmental crises. Leech then closes by considering the relevance of Antonio Gramsci’s conceptions of cultural hegemony in attempting to explain the puzzling consent granted to this system by large swathes of the world’s relatively privileged people – specifically, those residing in the imperial core of Europe and the United States – and then recommending the socialist alternative as a concrete means of abolishing genocide, while looking to the Cuban and Venezuelan regimes as imperfect, but inspirational experiments in these terms. In sum, while I take issue with some of his analysis and aspects of his conceptualization of anticapitalist alternatives, his work should certainly be well-received, read and discussed by large multitudes. Leech begins his text by referencing the original formulator of the concept of structural violence, Johan Galtung. In 1969, Galtung famously expanded prevailing notions of societal violence to include consideration of “the avoidable impairment of fundamental human needs or . . . of human life.” Key to Galtung’s formulation of structural violence in this sense is the gap between “the potential and the actual,” or “what could have been and what is.” Thus, avoidable death resulting from preventable or treatable diseases today constitutes violence, given the technological progression of modern medicine, whereas centuries ago this would not have been the case, according to Galtung. For Leech, then, capitalist society is indelibly marked by structural violence, as the vast inequalities in wealth and access to which it gives rise lead small minorities to be overwhelmingly privileged, while large groups of others are prevented from meeting their basic needs. Transitioning then to consideration of the question of whether the large number of avoidable deaths observed under conditions of capitalism should in fact be considered genocidal, Leech concedes that the UN’s 1948 Convention on the Prevention and Punishment of the Crime of Genocide excludes mass death resulting from one’s pertaining to a given social class as constituting genocide. However, he notes that an initial draft of the Convention from 1947 did include death or injury resulting from “lack of proper housing, clothing, food, hygiene and medical care, or excessive work or physical exertion” within the definition of genocide. Hence, while such a formulation did not appear in the final version with which we are all familiar, Leech does not accept legal positivism in this case as final; in this vein, he could have done well to have also mentioned that Raphael Lemkin, inventor of the concept of genocide, himself believed the charge should include mass murder of persons following from their belonging to particular classes. Leech nonetheless does mention that the 1998 Rome Statute defines the crime of extermination in part as “the intentional infliction of . . . deprivation of access to food and medicine calculated to bring about the destruction of part of a population,” so in this sense has the weight of international law behind him. Leech’s only remaining theoretical difficulty, then, is to argue that intentionality exists within the context of the perpetuation of capital-induced genocide: This proves an easy task, for the question of intent in judging capitalism is not one of examining the actions of particular persons or states (as in most traditional cases of the charge of genocide) but rather of judging the “logic” of the system as a whole. Hence, structural genocide – defined by Leech as “structural violence that intentionally inflicts on any group or collectivity conditions of life that bring about its physical destruction in whole or in part” – can be said to be an intentional outcome of adherence to norms which govern a social system that by nature “inevitably results in . . . death on a mass scale,” as does capital. For Leech, the proffered defense of willful blindness – “such was not our intention,” the system’s managers might exclaim – is no defense at all. Or, in Jean-Paul Sartre’s words: “The genocidal intent is implicit in the facts. It is not necessarily premeditated.” Following this opening discussion of the theoretical case for considering capitalism to be genocidal, Leech takes a few particularly devastating examples from the contemporary world to illuminate his argument. In Mexico, the passing of NAFTA in 1994 has led to the dispossession of campesinos (peasants) on a grand scale, as the country’s stipulated importation of heavily subsidized maize and other crops from the United States effectively led millions to abandon agriculture and migrate to Mexican and US cities in search of employment in the manufacturing sector, in accordance with neoclassical theories of “comparative advantage” – and very much mirroring the means by which capitalism emerged historically through the destruction of the commons in England. For Leech, this forcible displacement has resulted in the explosion of precarity within the informal sector of the economy in Mexico, as many ex-campesinos fail to find traditional proletarian jobs, and it has also driven the horrifying feminicides of maquiladora workers in the Mexican border regions, migration en masse to the United States (and attendant mass death in the Sonoran desert), as well as the horrid drug war launched in 2006 by then-president Felipe Calderón. Leech sees similar processes in Colombia, which hosts the second-largest number of internally displaced persons in the world (4 million), with many of these people having been removed from their lands due to military and paramilitary operations undertaken to make way for megaprojects directed by foreign corporations. Alarmingly, in India, Leech reports that more than 216,000 farmers committed suicide between 1997 and 2009, largely out of desperation over crushing debts they accumulated following the introduction of genetically-modified seed crops, as demanded by the transnational Agreement on Trade-Related Intellectual Property Rights (TRIPS, 1994) and the general shift from subsistence to export-oriented agriculture. In many cases, the genetically engineered seed varieties failed to expand yields to the levels promised by Monsanto, Cargill, and co., leading farmers then to take on further debt merely to cover the shortfalls as well as to pay for the next iteration of crops – which by conscious design were modified at the molecular level so as not to be able to reproduce naturally, thus ensuring biotech firms sustained profitability (a “captured market,” as it were). That such a dynamic should end in a downward spiral of death and destruction should be unsurprising, for all its horror. Leech further illustrates his case regarding capitalism’s structurally genocidal nature in a chapter examining Africa south of the Sahel. It is this world region that has been “most severely impacted” by capital’s genocidal imperatives, claims Leech, and it is difficult to argue with this claim: Merely consider the millions who succumb to AIDS on the continent each year or the other millions who perish in the region annually due to lack of medical treatment for complications within pregnancy or conditions such as diarrhea and malaria, themselves catalyzed by pre-existing background malnutrition. All this deprivation is exacerbated, argues Leech, by food-aid regimes overseen by wealthier societies – which in the US case demands that food be purchased from and shipped by US companies, thus effectively removing a full half of the total resources intended for the hungry – and the infamous land-grabs being perpetrated on the continent in recent years by investors from such countries as Saudi Arabia and South Korea. Fundamentally, though, the conflict is one based on the guiding principles of capital: Because Africans in general do not possess the requisite income to “demand” food commodities within international capitalism, they themselves do not constitute a “viable market” and so are rendered invisible – nonpersons, or “unpeople.“ In these terms, Leech also discusses the toxic role of the capitalist pharmaceutical industry, which famously and “logically” invests an overwhelming percentage of its research and development funds in highly profitable schemes for lifestyle drugs directed at first-world consumers – at their most absurd, treatments for baldness, erectile dysfunction, and so on – instead of in essential medicines that could relieve the horrendous disease burden borne by the peoples of the global South. Leech starkly illustrates these tensions by noting that, were the eight largest US pharmaceutical companies to have gained an average profit of $6.8 billion instead of $7.7 billion in 2008, with the difference going to purchase anti-retrovirals for the 3.8 million HIV+ Africans who go without any treatment at all, a considerable percentage of the estimated 1.3 million annual deaths observed on the continent resulting from HIV/AIDS could be prevented. Leech summarizes this all rather starkly: “There is no clearer illustration of the shortcomings in trying to reform the behavior of capital than the ongoing annihilation of poor people in sub-Saharan Africa who are dying as a result of the structural violence inherent in capitalism.” A similarly horrifying genocidal tendency for which capitalism is responsible is the next one briefly examined by Leech: that of the specter of catastrophic climate change. Leech claims it to be a “truly inconvenient truth” that the capitalist system itself is incapable of mitigating the total threat posed by global warming and instead precipitates this grim eventuality due to its incessant need for ceaseless expansion and profit, based principally on the indefinite exploitation of hydrocarbon resources. Clearly, it is the world’s poor who so far have suffered the most from capitalism’s degradation of the climate, despite having contributed next to nothing to the perpetuation of this world-historical problem: the estimated 2,000 Kenyan farmers who killed themselves upon the failure of rains in 2008, as Leech mentions, or the 260,000 Somalis murdered in the 2011 famine that followed from the worst drought in the past 7 decades. Leech observes that the ever-increasing annual death toll for which capital-induced climate destabilization is responsible will merely cause the overall number of 10 million annual preventable deaths to burgeon, leading ultimately perhaps to the deaths of “millions – or even billions,” in what may well develop into the extermination of humanity altogether. With his antepenultimate chapter “Legitimizing the Illegitimate,” Leech follows Gramsci in seeking explanations for the means by which such a brutal system as capitalism has reproduced itself over time. He observes plainly that “most people’s world views currently reflect the values of capital,” at least within more affluent northern societies, and that capitalism proceeds with its genocidal proclivities while enjoying “the apparent consent of a significant portion of the world’s population.” Like Gramsci, Leech largely faults the hegemonic cultural processes that obtain within core-imperial societies – formal education, the media, work arrangements, etc. – for normalizing the prevailing state of affairs, in part by excluding the barbarous proceedings of capital from consideration – in contradistinction to his own volume. Channeling Theodor Adorno, Max Horkheimer and other theorists with similar concerns, Leech notes that Western consumers remain largely ignorant of the extreme violence that is required as the very basis for the relative privileges they enjoy in global terms; worse, perhaps, most Northerners – a majority of whom, claims Leech, enjoy “middle-class lifestyle[s]” – have the capacity to escape the alienation driven by capital precisely by engaging in mindless consumerism, thus perpetuating the vicious cycle. For Leech, resistance to the rule of capital is far more evident in the global South, where Western imperial military ventures have long been employed to pacify and control the course of history, in radical denial of self-determination, dignity, and justice. Leech closes this volume with a plea for socialism as an alternative to capitalist genocide. Given the development of his argument in preceding chapters, he declares that any means of attempting to overcome the extreme violence of capital cannot serve merely as a “band-aid” to the metaphorical “appendage severed by the brutality of capitalism.” The system itself must be overthrown, dismantled; the point is not simply to apply anemic reforms that might slightly attenuate capital’s genocidal logic, but to abolish the genocidal system altogether. For Leech, the most appropriate political alternative is that of a socialism marked by participatory decision-making and social control of the means of production; crucially, as well, this project should include concern for nature – hence, “eco-socialism” – as much of the historical experience of socialism clearly has not.

#### Thus I affirm the resolution: Resolved – the appropriation of outer space by private entities is unjust

#### Voting affirmative is a means of engaging in cosmic hope – only by critiquing the dominant paradigms of the status quo are we capable of creating new possibilities for productive change

Natalie B Trevino, Predoctoral in Philosophy regarding theory and criticism at Western University, in 2020 [“The Cosmos is Not Finished”, Western University, <https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=9976&context=etd>,]

Las Rajaduras are the cracks, the untruths, in the appearance of coloniality that reveal the faults and failings of the colonial matrix of power. It is these cracks in the colonial surface that intimate another world. A world in which **many worlds are possible**. The La Rajadura of the Human/Man is that only the rational exploiter is capable of a subject position that provides the false objectivity of Modernity. **Other ways of being have been rendered invisible, unacceptable**, or, in the neoliberal sense, unprofessional. In the western conception of nature, the La Rajadura is that the presumption that **nature exists only to be exploited. To** **be human is to exploit; to be nature is to be exploited**. Under the cosmic order of the Final Frontier, this relation of exploitation is the only relation expected or accepted. Las Rajadras of the American Cosmic Order is dependence on What Has Been. The entrapment of the imagination by colonial imagery endlessly reproduces colonial man and colonized nature, which never moves towards any potential alternative futures. Most of the time, the Las Rajaduras of coloniality appear hidden because they are hegemonically produced as “the only way.” Yet, the way forward is not to heal or repair the cracks, but to show the Human/Man that Nepantla, the everlasting transitionary place, can foster the conditions to produce a **multitude of ways of knowing and being**. Currently, the Final Frontier is a **cosmic order** in which the Human/ Man is only **connected to Nature through consumption**. All his practices, whether recreational, economic, or military, **lead to exploitation. Human/Man remains outside of the cosmos as the cosmos is reified and consumed as an external resource**. This is a totalizing cosmology**. As long as this remains the dominant relation, no other relations can exist.** **Cosmic Hope is the expression of possibilities**; it is the committed **act of imagining the impossible to engage with the real world**. Cosmic Hope is the acceptance of the unknown, which leads to movement and change. Cosmic hope is much like the poet John Keats’ conception of negative capability: “it is the capability of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason” (1939). Or, to quote Rainer Maria Rilke, “it is to live the questions” (1984). Cosmic Hope is the acceptance of, and ability to, contain doubt **without striving for hegemonic certain**ty. Cosmic Awe is an innate aesthetic appreciation and sense of overwhelming amazement that arises from seeing/sensing the vastness of the cosmos. Cosmic Awe flies in the face of the Human/Man’s relationship to Nature, as it is a relationship based on sensory experience of the cosmos, rather than the consumption of. There is a vastness to this awe: “Awe and wonder [are] phenomena [that] stretch our cognitive capacities **beyond** **what can be mastered out of already existing knowledge structures**, hence leading to a broadening of available mental representations” (Weger & Wagemann, 2018). This is the critical edge of embracing new, old, and other epistemologies. It springs from the recognition that there is so much beyond Western Modernity. The abandonment of Modernity/Coloniality is not only the end of the West, but also the birth of the world. Cosmic Awe is not yet fully accessible. Yet, it is clear that space exploration has profound and life-changing effects on many astronauts (White, 1987; Yaden et al., 2016). This is why negative capability is essential to space exploration as adjusting to uncertainty will reduce anxiety about possible futures. Cosmic Revolution is the necessity of adapting to the material conditions of space. **It is the active formation or reformation of ways of being, seeing, and doing. It is the working through uncertainty, and “rewriting reality**” (Anzaldúa, 2015). Within Cosmic Revolution, there is the El 131 Mundo Zurdo: the world of many worlds (Anzaldúa, 2015; Anzaldúa, 1986; Keating, 2008; Marcos, 2006). The Cosmic Revolution is fighting for possibilities on this world and on others. It rejects von Braun’s future and the Killian formula, and moves beyond western civilization. Yet it does not create the opposite of those futures, formulas, or cultures, but, rather, **transcends them. It** embraces the best aspects of Modernity, while rejecting its oppressiveness. It is **welcoming of old and new epistemologies**. **What in this world** of historical and present oppression, in which a pandemic is sweeping across the face of the planet, **reveals the cracks in the masks of Capitalism**? The violence of white supremacy has been confronted and challenged by protests and riots across the United States, with acts of solidarity appearing around the world. These actions articulate the hope in the darkness that roams the surface of the earth. There is no academic explanation that I can offer, as every moment of hope requires a kind of inexplicable faith. The dichotomy between the cities on fire in rebellion and the launch of the SpaceX rocket reflects the conditions of coloniality perfectly. While historically oppressed peoples fight for a relation that is not exploitation, the Human/Man ventures to explore the Outside for the purposes of someday exploiting the cosmos What is the hope of the future? This world is on fire, yet space could become the source of salvation for capitalism. This is a possibility of Not Yet. There is potential for things to go terribly wrong. Yet, through an engagement with Cosmic Hope and awe, space exploration can become an engagement with Nepantla that leads to different worlds, both physical and conceptual. This Cosmic Hope is a form of decolonized hope—a hope that cannot yet exist in its fullest sense. Cosmic Hope is a **revolutionary praxis that grows, that blooms from the cracks of** the colonial and **capitalist world paradigms**. Cosmic Hope grows from Las Rajaduras, the possibility of truth to come out of untruth. It is a Hope of the Not Yet; it is a Hope of those long dead and those yet to be born. Coloniality is a 132 darkness, but a darkness that, like the darkest of nights, shows the distant lights of the stars and planets so far away. The stars are like Las Rajaduras. To see them, you must be in the darkness. That is what this work has attempted to do: to define the darkness that is coloniality yet reveal the stars that can show a different world. It is only in darkness that the stars shine bright. In the words of Paulo Freire, “The dehumanization resulting from an unjust order is not a cause for despair but for hope, leading to the incessant pursuit of the humanity denied by injustice (Freire, p. 91-92).” It is from this perspective I move forward. Freire, again: “Hope is rooted in men’s (sic) incompletion, from which they move out in constant search—a search which can be carried out only in communion with others (p. 91).” This is why one of the ways that we can practice decoloniality within the framework of space exploration—within cosmology more generally—is by taking advantage of the cracks within these structures that emerge from decolonial praxis. What I have strived to do in the previous chapters is produce an account of the coloniality of American space exploration and reveal its decolonial cracks. The question remains: how do we use these cracks? In this chapter, I take inspiration from the thought, style, and words of Anzaldúa to offer an elusive glimpse at the possibilities of Cosmic Hope, Cosmic Awe, and Cosmic Revolution. As Anzaldúa writes, “Las Rajaduras [the cracks] give us a Nepantla perspective, a view from the cracks …[that] enables us to reconfigure ourselves as subjects out the us/them binary...to construct alternative roads, create new topographies and geographies ...look at the world with new eyes, use competing systems of knowledge, and rewrite identities. Navigating the cracks is the process of reconstructing life anew” (Anzaldúa via Walsh, OD, p 83). I pray that this chapter will contribute to this process of reconstructing life anew. 133 Cosmic Hope Cosmic Hope is possible through practices that are actively striving for another world. It is both an emotional expression of, and active participation in, changing the world. It is also the acceptance that fluidity and interconnectedness are desired central qualities of social and political forms. Becoming open to possibilities and to infinite ontologies and epistemologies is one of the possibilities of space exploration. Cosmic Hope engages and represents the revolutionary potential of space exploration. Comic Hope is part of the answer to the enduring question: “what is to be done?” I anticipate that the new worlds we shall someday encounter will be built by those who experience them with the tools of that world and of that time, cognisant of the oppressions and histories all peoples have faced, not merely the Human/Man, but all people beyond the Eurocentric conception. The precondition of Cosmic Hope is the deconstruction, dismantlement, and destruction of the single relation of exploitation. What cannot take place is for humanity to bring the tools of earth to the cosmos. Terrestrial tools cannot build a cosmic house. Yet, what does it mean to write of Hope in a world of madness? If Cosmic Hope is the engagement with Las Rajaduras, then it is also an engagement with imagination and with awe. **The use of Frontier imagery in space exploration functions as trap for the imagination, as it mirrors and reinforces only relations of exploitation**. By engaging with the contradictions and dehumanizing conditions of coloniality, and discerning its limits, the imagination is liberated to find or create other forms of relations. Imagination free of the frontier is imagination free of death. In many ways, Cosmic Hope is the fight for life. It is the **will of oppressed people to take their lives into their own hands**, **to resist control by systems that do not benefit them**. Cosmic Hope is in every weapon handled by those fighting for love and humanity. It is a form of decolonial 134 love, which includes “a posture of violence towards Western Modernity and the matrix that supports and legitimizes it” (Drexler-Dreis, 2019, p. 136) Cosmic Hope is a form of reaching out. It is a decolonial shift, for, as Maldonado-Torres puts it, “building bridges is a technology of decolonization” (Maldonado-Torres, 2016, p. 30). Cosmic Hope is not simply the building of bridges between organizations and groups, but also a force that changes the ways of being and knowing of those on either side. Whereas Modernity/Coloniality is the expression of false creation, Cosmic Hope is an attempt at growth, at blooming, at building. It will be imperfect. How, then, does the transformation of the colonial cosmic order take place? Under technoModernity, the cosmic order is no longer simply a system of symbolic actions and relationships. Indeed, with the technologically produced access to outer space, what was once only myth and metaphor becomes experience and relation. The continuing form of the colonial cosmic order, as previously established, is Exploitation = Exploration + Control. How might this be reimagined? What is the cosmic order of a future that embraces the decolonial and transmodern? Outer space is a harsh environment for which humans did not evolve. This reimagining and reformulation of the cosmic order cannot be pure utopian fantasy, nor can it be one person’s speculative attempt. And yet, given the grounds of this project, I must, as an individual, offer something. Yet, I understand that my speculation must fail. It must fall short, because overcoming the Final Frontier and building the future requires many peoples, many epistemologies, and many hopes. Decolonization is a collective engagement with each other and the world; it seeks to ask and live those questions that Modernity/Coloniality devalued. This chapter is split into three sections; these sections do not parallel the Killian formula. I walk away from it. One of the essential, unanswered questions raised in rethinking space exploration deals with a fundamental concern: Why go into space at all? Given the connections between space exploration and capitalism and colonialism, is there a motivation for 135 migrating to outer space that is not implicated in this logic of coloniality? Despite this history of the use of cosmos for cultural, social, and political practices, I do think that there are numerous reasons to venture into space. How that looks and what will come of it exceed my powers of speculation. The future in space belongs there—in the future—to those who create and live in the future. I cannot be, nor want to be, the architect of the future in space. After all, the only tools currently available to me are those of the master. This work has been my theoretical attempt at dismantling those technological and political forms that built the path to the Moon. Yet, that path ends in death. The visions of von Braun and the mid-century thinkers founded a death march to the apocalypse. And so, **we must question the forms and norms that we might take with us into outer space**. Deep and strong ideas have been projected onto the cosmos and reflected back to Earth. From ideas of immortality to the ultimate escape of this earthly coil, **outer space has held all hope and all** hate. The development of **Western Modernity**/Coloniality could lead us to such a **limited future:** a **forever exploitative** understanding of the human and a forever destructive relation to nature. Yet, **this future is not set in stone**. That future is the one **where there are many worlds, but only way of experiencing** it. No, the future does not have to be as repetitive as some have made it. The stark silence of space has been drowned out by a thousand sounds of war, hatred, and fear. But, if, just for this moment, **we let the silence roar,** we can hear one voice, a voice urging us, as a planet, to stop struggling with rebuttal, to stop replying, to “walk away from the riverside,” in the words of Gloria Anzaldúa . It is time for a new creation. Outer space can hold new relations of humanity— not of the exploiter and the oppressor—and a completely different formation of distribution and social relations. This whole work has been a **critique of the existing conditions of space exploration**, of the future. This critique comes from a place of deep and unfathomable love. This chapter is my dream for space. Rationality will not lead the way into space. It is in this silence that a new cosmic order may emerge. The Final Frontier with its formula: exploitation= exploration + control is an 136 unwelcome earthly condition. In this way, this cosmic order destroys its own future through internal contradiction. We must consider that the constructed relationships and ways of knowing can and do reinforce conceptions of humanity and in turn, nature. Without turning away from the colonial forms of humanity and nature, we cannot envision a future that is more than the past and present repackaged. In Capital, vol. 1, Marx wrote that human relations to nature can be understood through technology (2013). The imagined technologies produced for the many, yet strangely repetitive visions of space, have been premised on control and exploitation. American space orientation has been: “What can this encounter with this or that in space do for me?” Cosmic Hope situates space exploration not through consumption, but through the engagement with the experience of being. Cosmic Hope is incomplete, and it must remain so. It contains Anzaldúa’s declaration that “rigidity means death” (1986, p. 101). Undoubtedly, the future cannot be made by the vision of one person. Trapped within the colonial matrix of power, the imaginative works of futurists and space advocates failed to create anything more than more “perfect” technologically advanced futures. These futures failed to encompass most of the living beings on the planet. These futures were grounded in technological progress as Progress. This does not produce a distinctly different comprehension of the “human” or “nature.” The colonial imagery that plagued Modernity and its technological-capitalist infant, space exploration, appears so fundamental that to remove it would seem to destroy the very thing itself. What imagery can resurrect the cosmos from the Western colonial imaginary? Perhaps outer space is already too colonized. It is a colony, a technological haven, for coloniality to reproduce in a distinctly new environment. Outer space is an intimate partner of the planet Earth. There is no other way. To go into space without the colonial intent or the conditions of coloniality is not impossible. In fact, given the research of Ben Finney who states 137 that space communities must be collectivist to survive, community in space can only be sustainable if it is decolonized. It is my understanding, then, that a decolonial definition of humanity and nature is necessary for the very existence of a space civilization. The very physical environment of space is the material condition that could produce this change. It is not, however, a given. Space civilizations could—in an attempt to regulate the harsh conditions—swing towards a more authoritarian form of political and social order (Cockell, 2015). **This is why a vision of the future that understands and critiques the colonial conditions of Western Modernity is needed to direct the future away from a hegemonic drift and towards a humane revolution**. What cosmic order encourages and connects all cosmic orders? How can we all be human? And how can all things, including culture and politics, be nature? As mentioned in previous chapters, the Killian formula is one rooted in the capitalist mode of production, which need colonial forms to expand and function. What the Space age is a labour force for exploitation either at the source of the “resource” or en route to it (like the Atlantic slave trade). Without this dehumanizing component, full exploitation of space is not possible. Current conditions of capital, which form a circuit of exploitation, shall not be the aim of a vision. It is to reimagine the ways in which all peoples might live on earth and in space. It is far too easy to get lost in fantastic ideas about the future; it is harder to get there. What space exploration offers can be a possibility of change, which will be forced on Human/Man in his encounter with harsh environment of space. To engage with this change, with Hope and Awe, is not to reproduce systems of oppression, but to produce wholly new and different socio-economic and political structures. Unlike the Killian formula, where the intention is already set and produced (exploitation), Cosmic Revolution is an opening for the variety of possibilities, and the production or re-ignition of ways of knowing or being. Hope is not a simple emotion. As Bloch says, “Hope is thus ultimately a practical, a militant emotion, it unfurls banners. If confidence emerges from hope as well, then the expectant 138 emotion which has become absolutely positive is present or as good as present, the opposite pole to despair” (1996, p. 112). . The failure of space exploration to produce a space-faring civilization stems from a lack of engagement with the darker side of Modernity. It is the failure of the architects of space to see that those conditions that actually produced western Modernity are essential for the continuation of Modernity into space. I do not want the Bezos, Musks, and NASAs of the world to create the oppressive labour relationships and extractivist practices in space for them to succeed in their projects. They are not practices of Cosmic Hope. But to create and affirm structures that elevate life, it is necessary to draw on the sense of Cosmic Awe Cosmic Awe If Cosmic Hope is the action, Cosmic Awe is the experience. Reconceptualizing relational forms must be an ongoing process that is always present in negotiations and understood as a holistic practice. This is why understanding the possible impact of space exploration on humanity can increase the sense of belonging to the universe. As the Western self-conception places Human/Man outside, and above nature, then the experience of being part of it can change that perception. Research on the Overview Effect has identified that “the most prominent aspects of the astronauts’ reported experiences, namely: (a) appreciation and perception of beauty, (b) unexpected (even overwhelming) emotion, and (c) an increased sense of connection to other people and the Earth as a whole” (Yaden et al., 2016). The Overview Effect, as it is laid out here indicates several things. The first is aesthetics. This sensory experience is embodied. The second is the emotional reaction to space flight and the third is the outcome of new relations based on that experience. These three qualities are arguably counter-hegemonic in that they are more intricately connected to western conceptions of femininity 139 than to masculinity. The observation of global interconnectedness is not unique to astronauts but is an oft-mentioned condition in anti-colonial and feminist theories. This interconnectedness is not hierarchical—the Final Frontier orientation—but instead views the world as an ecological system that “considers the complexities and the totality” (Merchant, 1996, p. 88). To be outside Modernity is to be within nature. This is a position on the border, as Anzaldúa would say. It is only from this place that alternatives can be imagined. It is from this place that Anzaldúa said that the Mestiza consciousness can develop (1996). The mestiza consciousness is a consciousness produced out of living with contradictions of identity and place (Anzaldúa, 1986) This is not to say that mestiza consciousness and the Overview Effect are the same. One is a direct result of experiencing the space environment, while the other is a result of living in a colonized body in a dualistic culture and existing in the colonial wound. Yet, it is from this place that conscious rupture can happen. If the Overview Effect can cause one to experience the holistic reality of the cosmos and the world, this is similar to conception of “Mother Earth [as] a living dynamic system made up of the undivided community of all living beings, who are all interconnected, interdependent and complementary, sharing a common destiny” (Buxton, 2017). The reduction of the universe to a source for the factories of capitalism chained both humanity and Nature to a single understanding of what each of them were and severed the relationship between them. If rigidity leads to death as Anzaldúa states, such a reductionist relation is this rigidity of the American colonial cosmic order. The multitude of ways that one person, a culture and biological group can relate to and with the cosmos should be as fluid and complex as possible. What **coloniality and capitalism have done is produce a set of relations that, according to Marx, control the people instead of the people controlling the system** (2013). In the case of the American Cosmic Order, the future is produced out of the systems of capitalism and coloniality, and this reduces all possible futures to those of exploitation. Embracing different ways of experiencing the 140 world and engaging with them and affirming them can allow transmodernity to bloom. Transmodernity is a “planetary vison in which humans are beginning to realize that we are all (including plants and animals) connected to one system, which all of us are interdependent, vulnerable and responsible for the Earth as an undividable living community” (Ateljevic, 2013). If astronauts can experience this life-changing vision even when they inhabit the already-existing cosmic order, then it demonstrates that the Final Frontier trope not only limits ways of being and thinking but does not prepare us for the multitude of possibilities offered to us by the cosmos. In this way, the Final Frontier fails to adequately produce peoples for the space environment. What is needed, then, is what Arturo Escobar calls a socionatural world: “An understanding of the complexity of relations between the biophysical and the human domains (physicochemical, organic, and cultural, broadly speaking) that account for particular configurations of nature and culture, society and nature, landscape and place, as lived-in and deeply historical entities” (2008, p. 29). This socionatural world embraces the fluidity of the lived experience, experiences the multi-dimensional relations to a place or peoples and engages with historical and living perspectives. This is a life-affirming worldview that fits with the conception of Cosmic Awe because it necessarily invokes a reaction that is more than just rationalization. Cosmic Awe is almost a point of intersection between Cosmic Revolution and Cosmic Hope, as it is the experience of the new or possible material conditions through action. Cosmic Awe is imbued with the Not Yet, which Bloch described as the presence of possibility (Bloch, 1996). In Hope, the expression of negative capability is essential for moving away from the hegemonic and towards the unknown. This movement is facilitated by cosmic awe. Negative capability helps to break Human/Man free from the dualism of Western thinking by granting space for multiplicity and doubt, yet it is not necessarily a retreat. Smith considers that the shift must take the form of moving from “conquest of nature” to 141 “adaption to nature,” yet, without a critique of the expansion of capitalism into space, this shift cannot occur (2015). The conquest of nature is essential to capitalism. The exploitation of natural resource is a critical component of the economic system. Yet, Smith seems to think that emphasizing that human beings are adaptive to nature is only a matter of “reconsideration,” instead of an entire struggle against several systems of exploitation. **To moves towards an adaptive of nature, humanity must reject colonialism, capitalism, and patriarchy.** The notions of openness and fluidity may allow us to think through this adaption, as they foreground the necessity of leaving things undefined. There is something powerful, even mystical about the idea of the open, the unknown, and the Not Yet. The Killian formula and its limited possibilities explodes the unknown, not with openness, but through categorization and use-value. The Killian understanding of the universe reduces both the universe and humanity to What Has Been. This does not allow for radical difference nor change; it produces only technological changes with regressive, even stunted, developments of social, political, or cultural ways of being. Of course, someone may object that, if this is true, then how come some theorists have imagined another world? Because the operations of colonialization and capitalism have always already produced multiple worlds—some oppressed and filled with death, some with technological advancements, glitter, and gold. Theory cannot make the future; only the world, the body, and the community can do that. This is why Cosmic Revolution is the final element in this consideration of the future. For me, there is no theory of the future, only possibilities of ways of walking. In the words of Gloria Anzaldúa, at some point we must leave the side of the river (1986). The future cannot react to the past, nor can it find its hope or purpose in the past. It cannot find those things in the present either. The future must remain the future: The Not Yet. Until now, space theorists, advocates, and the elites have looked back as much as forward, dragging with them the colonial and capitalist oppressions that made the frontier. Instead of reaching into the past to produce a future, 142 the future begins here, not because of what is or what should be; it begins here because it is where we (humanity, in all its various forms) are. What comes from the combination of Cosmic Hope, Awe and Revolution is still yet to be known. Perhaps the radical interconnectivity of a new cosmic order will flourish. For many, the future belonged to God. According to some Russian Cosmists, we humans could become that God (Tsiolkovsky, 1934). Perhaps we do not need to become a new God, but, rather, a new human—whose possibility resides in us now—that must be nurtured and protected from the vile forms of the past and present. There is no future without the starving and filthy masses of this world. A universe in which many universes exist is the future, the only possible future is all the futures, and this is only possible once the cage of the Killian formula is torn apart, which cannot be done with the tools of oppressors. It has been necessary to diagnose the problem of coloniality within the various theories and visions of the future in space. The **failure to diagnose the actual problem, the real reason and problem with the American space paradigm(s) and ideology has complicated the task of envisioning a future difficul**t. **There is no future without the liberation of humanity.** There is no liberation of humanity without the decolonization of the idea of liberation or the idea of humanity. There is no decolonization with the master’s tools. The only future is the future with futures, with peoples, with liberations vast and varied. All need to be decolonized, even the colonizers. This is why the idea of a universal and abstract liberation is impossible. We all require different forms of liberation. To universalize it merely emboldens the colonial matrix of power, rather than diminish it. To move forward, space exploration cannot be pursued as a reaction to contemporary political aspirations, nor can it have any motivation or justification that comes out of desperation or fear. The only way into and about space is through an unknown hope, Cosmic Hope—hope for and without intention. 143 It is about taking what comes as it comes, but that there must be movement and response. It is and must be a paradox of response and action. No future is produced without a rigorous process of procreation and birthing. This is the engagement with Nepantla—the suffering and unknowability of the future that is essential for the production of a future in space without the conditions of coloniality. Intention of difference is not enough to produce a difference. Material conditions of governance, of social relations, of racial and sexual relations, and the very understanding and being of Humanit(ies) must be transformed to (eventually) produce a world (a universe) without coloniality. Or, at the very least, a world of worlds that rejects coloniality and struggles against it for a future of vast possibilities. To propose these changes, I will remap conceptions of change (the formula) on top of the aspects of cosmic orders that Krupp observed. This does not mean that space exploration must wait for the revolution, but that the process and intention of space exploration must be made into a revolutionary form. As Ben Finney wrote: Yet, settling in space will be a revolutionary act, because leaving Earth to colonize new worlds will change humankind utterly and irreversibly. Anthropologists focus on technological revolutions and their social consequences. The original technological revolution, that of toolmaking, made us human. The agricultural revolution led to the development of villages, cities, and civilization. The industrial revolution and more recent developments have fostered the current global economy and society. Now, this same anthropological perspective tells us that the space revolution is inevitably leading humanity into an entirely new and uncharted social realm. (Finney, 1992) Let me state, however, that the space revolution and space exploration as revolutionary are two different things. Space exploration as a revolutionary form requires more than just the requisite technological advancements. It also requires a theory of the human, of nature, of relationships and processes, which can be produced out of imagination and hope. As Gloria Anzaldúa writes: But it is not enough to stand on the opposite riverbank, shouting questions, challenging patriarchal, white conventions. A counter stance locks one into a dual of oppressor and 144 oppressed: locked in mortal combat, like the cop and the criminal, both are reduced to the common denominator of violence. **The counter stance refutes the dominant culture’s views and beliefs, and, for this, it is proudly defiant**. All reaction is limited by, and dependent on, what it is reacting against. **Because the counter stance stems from a problem with authority—outer as well as inner—it's a step towards liberation from cultural domination**. But it is not a way of life. At some point, on our way to a new consciousness, we will have to leave the opposite bank, the split between two mortal combatants somehow healed so that we are on both shores at once and, at once, see through serpent and eagle eyes. Or perhaps we will decide to disengage from the dominant culture, write it off altogether as a lost cause, and cross the border into a wholly new and separate territory. Or we might go another route. The possibilities are numerous once we decide to act and not react (1986, p.100-101). This is where a paradox of action and reaction reside. It is different to react to a changing environment in relation to others and the world than it is to react out of desperation and violence. It is impossible to escape the violence of Modernity. It must be directly fought not only to counter death, but to embrace life. Thinking and dreaming are only forms of radical action because they are ways of finding Las Rajaduras. Hegemony is a rigid structure that requires the rigidity of all things and peoples. One’s embodiment of fluidity finds the cracks in the structure of Modernity

#### Thus the role of the ballot is to vote for the debater who engages in the best method of resistance to capitalism

#### Policy makers have an ethical obligation to examine capitalism and attempt deconstruct its forces

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For Zizek it is imperative that we cut through this Gordian knot of postmodern protocol and recognize that our ethico-political responsibility is to confront the constitutive violence of today’s global capitalism and its obscene naturalization / anonymization of the millions who are subjugated by it throughout the world. Against the standardized positions of postmodern culture – with all its pieties concerning ‘multiculturalist’ etiquette – Zizek is arguing for a politics that might be called ‘radically incorrect’ in the sense that it breaks with these types of positions 7 and focuses instead on the very organizing principles of today’s social reality: the principles of global liberal capitalism. This requires some care and subtlety. For far too long, Marxism has been bedeviled by an almost fetishistic economism that has tended towards political morbidity. With the likes of Hilferding and Gramsci, and more recently Laclau and Mouffee, crucial theoretical advances have been made that enable the transcendence of all forms of economism. In this new context, however, Zizek argues that the problem that now presents itself is almost that of the opposite fetish. That is to say, the prohibitive anxieties surrounding the taboo of economism can function as a way of not engaging with economic reality and as a way of implicitly accepting the latter as a basic horizon of existence. In an ironic Freudian-Lacanian twist, the fear of economism can end up reinforcing a de facto economic necessity in respect of contemporary capitalism (i.e. the initial prohibition conjures up the very thing it fears). This is not to endorse any kind of retrograde return to economism. Zizek’s point is rather that in rejecting economism we should not lose sight of the systemic power of capital in shaping the lives and destinies of humanity and our very sense of the possible. In particular we should not overlook Marx’s central insight that in order to create a universal global system the forces of capitalism seek to conceal the politico-discursive violence of its construction through a kind of gentrification of that system. What is persistently denied by neo-liberals such as Rorty (1989) and Fukuyama (1992) is that the gentrification of global liberal capitalism is one whose ‘universalism’ fundamentally reproduces and depends upon a disavowed violence that excludes vast sectors of the world’s populations. In this way, neo-liberal ideology attempts to naturalize capitalism by presenting its outcomes of winning and losing as if they were simply a matter of chance and sound judgment in a neutral market place. Capitalism does indeed create a space for a certain diversity, at least for the central capitalist regions, but it is neither neutral nor ideal and its price in terms of social exclusion is exorbitant. That is to say, the human cost in terms of inherent global poverty and degraded ‘life-chances’ cannot be calculated within the existing economic rationale and, in consequence, social exclusion remains mystified and nameless (viz. the patronizing reference to the ‘developing world’). And Zizek’s point is that this mystification is magnified through capitalism’s profound capacity to ingest its own excesses and negativity: to redirect (or misdirect) social antagonisms and to absorb them within a culture of differential affirmation. Instead of Bolshevism, the tendency today is towards a kind of political boutiquism that is readily sustained by postmodern forms of consumerism and lifestyle. Against this Zizek argues for a new universalism whose primary ethical directive is to confront the fact that our forms of social existence are founded on exclusion on a global scale. While it is perfectly true that universalism can never become Universal (it will always require a hegemonic-particular embodiment in order to have any meaning), what is novel about Zizek’s universalism is that it would not attempt to conceal this fact or reduce the status of the abject Other to that of a ‘glitch’ in an otherwise sound matrix.