#### The year is 2187, human exploration of space has taken leaps to extend deep in the universe thanks to innovations of Amazon, Alibaba, and Gazprom the human species has been able to jump from planet to planet colonizing everything in its path taking resources, pillaging, and killing anything in the feudalist leader’s path. But these decisions did not come from the leaders of the United States, Russia, and China rather Jeff Bezos, Jack Ma, and what used to be Russians shareholders, but were recently bought out by the consciousness of Mark Zuckerberg uploaded into the metaverse – the United BMZ under the guidance of these people have turned what we know as planet earth into a company feudalism that has begun to expand the universe in their thirst for resources need to oil the gears of racial intergalactic capitalism

#### These images of NewSpace companies’ broader goals for colonization is reminiscent of NASAs 2010 art series “Visions of the Future.” These frontier symbolics are coded to invite the expansion of settler colonial racial capitalism as the necessary condition of the future of “all humankind.” In these posters, the earth is a site of foreclosure, a non-oasis without respite nor air to breathe; the future is simply the “redder” grass able to provide a new settler monument “cold faithful.” This inextricable link between world making propaganda and extraterrestrial sovereignty reveals that the future offered is simply a hyperreal repetition of settler colonial racial capitalism subtended by the domesticating infrastructure of the drive for colonization and resources

#### The colonization of space is a part of a technoscientific development where technology becomes the sedimentation of hyperreality – the status quos attempt for space development is a colonial romanticism, an image of a future of a terraformed Mars – these representations are philosophical and ideological simulacrum of space developments not for the survival of the human but for the survival of capital – NewSpace has invaded the social imaginaries of consciousness which has become another iteration of that libertarian imaginary

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The discussion of human futures is a difficult topic with which to engage. Within the Western conception of linear time, the future is temporally forward and veiled within statically three-dimensional existence. Therefore, in this chapter, I will turn to some postmodern theorists and philosophers in order to engage with how to situate the role of science fiction, science, and NewSpace within human futures in outer space. This section is also a dreamscape of ideas that may not be fully fleshed out, but are here to generate discussion, hence the heavy reliance on phenomenology. The ideas of hyperreality were first generated by Jean Baudrillard ([1981] 1994) who defined the concept as “the generation by models of a real without origin or reality” (1). Hyperreality is a simulation; an intense blending of “reality” and representation so that there is no longer any clear line wherein one ends and the other begins—and in fact, if one accepts the theory of hyperreality, there is no reality anymore, only simulations of reality, which are unmeasurable because reality and hyperreality are indistinguishable—there’s nothing to measure against the two since reality no longer exists as a separate entity (Baudrillard [1981] 1994). Umberto Eco (1986) expands on Baudrillard’s ideas to suggest that hyperreality is created through a desire for a certain “reality,” and in order to realize that desire, one must fabricate a reality that can be consumed as real. Like Baudrillard before him, Eco (1986) uses Disneyland as an example of hyperreality that manufactures desires that can only be realized within the hyperreality it has created, leading one to wish for the hyperreal rather than nature/the “real.” Eco (1986) illustrates this by saying In this sense, Disneyland not only produces illusion, but—in confessing it— stimulates the desire for it: A real crocodile can be found in the zoo, and as a rule it is dozing or hiding, but Disneyland tells us that faked nature corresponds much more to our daydream demands. When, in the space of twenty-four hours, you go (as I did deliberately) from the fake . . . wild river of Adventureland to a trip on the Mississippi, where the captain of the paddle-wheel steamer says it is possible to see alligators on the banks of the river, and then you don’t see any, you risk feeling homesick for Disneyland, where the wild animals don’t have to be coaxed. Disneyland tells us that technology can give us more reality than nature can. (44) Baudrillard ([1981] 1994) further discusses what happens when science emerges out of science fiction and what happens when the difference between the two is indistinguishable—in other words, the real recedes and all that is left are simulations of the hyperreal and “science fiction in this sense is no longer anywhere, and it is everywhere” (126). In this age of accelerated technoscientific development—as I have argued in previous chapters—science and science fiction are melded into a Baudrillardian simulation where artificial intelligence, autonomous rocket boosters that land on autonomous drone ships, and a constant human presence in outer space is the sedimentation of hyperreality where, as Milburn (2003) has said, “the model becomes indistinguishable from the real, supplants the real, precedes the real, and finally is taken as more real than the real” (267). When the hyperreal meets the hyperobject of the cosmos, a term coined by Timothy Morton (2013) to describe a thing that is “massively distributed in time and space relative to humans” (1), interesting (and confusing) discussions can arise. For the purpose of this thesis, I would like to argue that the nebulous entity of NewSpace— which is multifaceted in that it is philosophical, ideological, and physical in itself—has emerged as a simulacrum from the hyperreality of contemporary space developments. Baudrillard ([1981] 1994) describes a simulacrum as not exactly a copy or imitation of the real, but a thing that becomes a truth in itself—as it has emerged from hyperreality, which is its own truth. I believe Gilles Deleuze (1990) defined simulacra (plural of simulacrum) best when he said: “The copy is an image endowed with resemblance, the simulacrum is an image without resemblance” (257). The overarching colonial romanticism—of a rustic pioneer traveling to a distant land—that is utilized so often by NewSpace plays into similar romanticisms employed by NASA, but instead of the objectives remaining the same, the NewSpace agenda is only concerned with profits. This is why I argue that NewSpace is acting as Saturn devouring his son, simultaneously destroying and emerging as a simulacrum from the 32 hyperreality of cosmic imaginaries. In essence, NewSpace is a copy without an original —feeding off of imaginaries that are simulations and creations of their own devising. The public, in turn, is buying into this vision as if it is the only reality possible. To utilize Eco’s (1986) example above, NewSpace is Adventureland in Disneyland and NASA and other governmental agencies of “OldSpace” are the paddle-boat on the Mississippi. No one wants to wait ten years for a scientific mission when Elon Musk can bring them to Mars in half that time. However, this is not a defense of the “real.” I am a proponent of “utopic thinking,” which in itself is hinged on a dislocation from reality in order to imagine a better world. The tyranny of the so-called real—a term that is often defined by governments and corporations in order to sustain the status-quo (Collins 2008)—is precisely how NewSpace is able to invade the imaginaries of the future so easily. If one is able to dismiss a social justice minded futurologist or science fiction writer with a “Get real!” or “That could never work in reality” then it shuts down entire social theories that resist the established ideology. David Harvey (2000) discusses this in relation to alternatives to capitalism, which fits quite well when discussing the resistance to NewSpace: If the mess seems impossible to change then it is simply because there is indeed “no alternative.” It is the supreme rationality of the market versus the silly irrationality of anything else. And all those institutions that might have helped define some alternatives have other been suppressed or—with some notable exceptions, such as the church—brow-beaten into submission. (154) In the “rationality of the market” all that remains are “degenerate utopias” (Collins 2008; Marin 1993), places like the previously mentioned Disneyland, which presents itself as a utopic place, but is actually shrouding the commercial “reality”—“the Main Street façades are presented to us as toy houses and invite us to enter them, but their interior is always a disguised supermarket, where you buy obsessively, believing that you are still playing” (Eco 1986, 43). According to Eco (1986), Disneyland’s hyperreality begins when one submits to the complete “fakeness” of the simulation in order to bask in the desirous visions of the utopia that it presents. Thus it becomes completely real. I saw this attempt at creating a hyperreality at Spaceport America, with the science fiction inspired door frames and the tour guides dressed in flight suits. Elon Musk presents it to us when he utilizes a four-stage image of Mars, starting with the red planet and ending with a terraformed, Eden-like utopia of oceans and clouds and green forests; a new Earth that beckons to colonizers with new possibilities and untapped markets. This photo is a Debordian “spectacle” that establishes and mediates a social relationship with the public through images (Debord 1994). Photos like the one above are preambles to the spectacle of 1,000 ships departing to Mars every 26 months. Even if that does not become a reality, Musk and other NewSpacers have already begun to creep into the social imaginary of space and supplant their own ideologies as truth into the cosmic hyperreality, which may relate to why my survey results contained foundationally contradictory answers. These photos are part of a larger trend within the space science hyperreality. Messeri (2016) ethnographically uncovers how Martian mapmakers are creating incredibly detailed maps that are created without direct reference to the landscape, since we have never set foot there. Therefore, “the primary goal of today’s [Martian] maps is . . . to establish Mars as inviting to human explorers,” much like the images of a terraformed Mars advertised by SpaceX (Messeri 2016, 74). Like the Jorge Luis Borges short story Del rigor en la ciencia, the map precedes the territory, and the obsession of creating a perfect map makes that map the new reality (as a simulation), while the empire it’s supposed to represent—or in this case, the planet Mars—crumbles away, ceding to the hyperreality of its representation. NASA—in its neoliberal present—is enveloped within this hyperreality as well, perhaps as it recognizes the simulation that NewSpace exists within, and how powerful it can be in the sphere of public relations. However, their production of nostalgia inducing travel posters for places humans have never been are coded to invite—and exclude—certain types of futures (Messeri 2016). Namely, these futures are white, colonial, and evoke vintage 1950s–1960s travel advertisements, a period of U.S. history ripe with inequality and oppression. The political cannot be divorced from aesthetic, no matter how much opponents may try to argue against this point; I’m sorry but Foucault 33 was right. And these theoretical frameworks are the reason why I have argued for social science to take science fiction seriously, especially science fiction that does not espouse the tropes of Spencerian social theory. Science fiction writers who identify as people of color, Indigenous, women, and LGBTQI+—with enough critical mass—can create a simulation and hyperreality with their own work that forces change at the root. The power of words, of worldmaking, of placemaking that is so inherent in science fiction writing are the catalysts for social change, especially in Earth-bound space science. Furthermore, social scientists should not only embrace the political world that science fiction inhabits, but we should be working together as a collective to actively disseminate the social science that good science fiction writers are already conducting. CHAPTER 11: WHAT IS TO BE DONE? This chapter title should really be the title of the entire thesis since it is the question that I have been muttering since the beginning of this research project—except that the title has already been skillfully used by the likes of Nikolai Chernyshevsky, Leo Tolstoy, and Vladimir Lenin. I do not think that my name has quite the prestige to fit in with the company of those gentlemen. So instead, I have decided to make it the name of my final chapter in which I try to discuss how we move forward from the rather bleak present I have divulged in these pages; but I will also throw in some radical tangents in order to keep with the titular theme. As I have argued extensively in this thesis, American imaginaries of the future are dominated by right-libertarianism. NewSpace venture capitalists like Elon Musk and Peter Thiel have latched on to futurist thinking and have the power and capital to begin enacting some of their visions. This is no surprise; engagements with the future emerged as a distinct field of social inquiry during the Cold War when neoliberal capitalism was battling state Communism for supremacy—and the political context has changed very little (Tolon 2012). However, NewSpacers depend on a climate of stress and conflict in order to justify their drastic socio-political-economic actions. For example, Peter Thiel—founder of PayPal, Facebook board member, and heavy investor in SpaceX—has said: “Because there are no truly free places left in our world, I suspect that the mode for escape must involve some sort of new and hitherto untried process that leads us to some undiscovered country; and for this reason I have focused my efforts on new technologies that may create a new space for freedom” (Gittlitz 2016, para. 8). To Thiel, and many of his right-libertarian venture capitalist revolutionary vanguard, these places are threefold: artificial island micro-nations, the Internet and cyber-communities, and outer space (Gittlitz 2016). Thiel has invested in all three of these areas and was recently placed on Trump’s transition team. Soon after Thiel’s appointment, Trump decided to divert NASA funds from climate change studies to deep space exploration. This has a lot to do with the fostering of another American frontier. As of the time of my writing this thesis, Trump has announced plans to build a wall along the United States / Mexico border. These Earthly enclosures are direct manifestations of the cosmic enclosures championed by NewSpace—and often these two proclamations are advocated by the same people in the same positions of power. Is the cosmic frontier doomed to represent the same tragedies and oppression as our Earth frontiers? Not necessarily. And here, I will begin to take a long needed—albeit brief—shift toward optimism. Today, our borderlands are places of violence, where states exert their influence in order to destroy or capitulate the Other—either figuratively or literally. However, this was not always the case. As Durrenberger (2016) has said: [In the past] the borderlands were less foreboding, places the regularizing reach of states had bypassed because they were not worth the effort. To them went those castoffs the states threw off in their great drives to define and unify: prophets, anthropologists, missionaries, and more recently revolutionaries and terrorists. Many who have lived in those areas return with stories of human potential, encouraged by what they have seen of the power of our species’ humanity. (para. 5–6) Could outer space provide a space to unleash the human potential for compassion? With the absolute vastness of the cosmos, it seems impossible—past a certain technoscientific level that I believe we are rapidly approaching—for dominant power systems like states or corporations to garner control over such enormous distances. A certain degree of anarchy—if not full fledged social anarchism or anarchistcommunism—seems to be, in my mind, an inevitability. As I have argued in previous publications, direct democracy within communities outside of the Earth’s influence seems to be the most equitable and efficient way to socially organize in a hostile environment (Genovese 2016d). Haqq-Misra (2015) proposes “liberated settlements” on Mars that reject Earthly authority and operate within their own self-determination. Philosophers, social scientists, and science fiction writers all seem to be contributing socio-political theory to this new “Space Age of Enlightenment.” With the continued generation of liberatory work, we may have a chance at chipping away at NewSpace’s hegemonic lineage of the frontier that I introduced in Chapter 6 and establish a lineage of liberation instead. In fact, I do not think that we have a choice any longer. As of this writing, as I sit behind the abrasive glow of my computer screen at 11:49pm on February 1, 2017, the United States and the world seem to be at a dangerous tipping point. The fascist creep has turned into a fascist sprint, and those that wish to claim neutrality or inaction are implicitly siding with the dominant powers that wish for nothing less than the destruction of the environment for capital gains, a stripping of what little civil protections are left, a mass defunding of all educational systems, a homogenizing of this country utilizing Nazi-era racial order schemes, a villainization of anyone who is not a right, white, Christian man, continued colonial expansion into sovereign Indigenous land while repeatedly breaking treaties, rampant hetero-patriarchy, and the list continues ad nauseam. It is our duty as anthropologists, as social scientists, as science fiction writers, as space enthusiasts, as educators, as human beings to make sure that while we are on Earth, we will fight for the weak, the marginalized, and the disenfranchised by any means necessary and with respect, ears open to the requests of those people who have suffered for years under the boots of oppression, and for whom we may have very little frame of reference in regard to their suffering under structural violence. And as we begin to journey and live away from the only place we have ever called home, we must leave into the cosmos for the right reasons—not for capital, for power, or for narcissistic perceptions of glory, but in the spirit of equity, mutual aid, love, diversity, as well as playful curiosity, and we must do it with soul, with heart, and with joy.

#### This dystopic future is not just symbolic, it is legal – Obama’s 2010 “national space policy” stated: “The US is committed to… facilitating the growth of a… commercial space sector that supports U.S. needs… [and] advances US leadership in the generation of new markets.” The 2015 “SPACE Act” cemented this vision of the future, signaling the beginning of the regime of NewSpace, a hyperreal playground projecting the shared colonial desire of NASA’s future via the newly inaugurated regimes of space privatization – the SPACE Act revealed the OST’s (en)framing of space as commons only ceded sovereignty to capital, hiding statecraft’s ties to accumulation in plain sight. These directives enclose the future of space to the highway exits of accumulation.

#### Remember that this is the future NASA envisions – outer space as the spatial triangulation of accumulation, logistical counterinsurgency, and worldmaking in the service of domestication.

Mezzadra and Neilson, 13 (Sandro Mezzadra, Associate Professor of Political Theory at the University of Bologna, where he teaches postcolonial studies and contemporary political theory; Brett Neilson, Professor, Institute for Culture and Society; “Extraction, logistics, finance: Global crisis and the politics of operations,” https://www.radicalphilosophy.com/article/extraction-logistics-finance)

Now that the global crisis of capitalism is entering its fifth year, it is possible to discern the contours of its unfolding. No New Deal or world war is emerging to save the day. The ritual purification of austerity has not cleansed the global sewer of finance despite the harsh and unequal punishments it has delivered. From the fall of Lehman Brothers to the protests in Syntagma Square, from the stalled development in Indian ‘new towns’ to the refusal of migrant workers to return to non-existent jobs in China’s production belts or the Gulf states, the elusive temporality of the crisis does not deliver the sense of an ending. In its classical meaning, the notion of crisis sets the stage for a decision. [1] What seems to be at stake at the present time is not decision as such but rather the indefinite prolongation of the time in which any decision might be made. The rhetoric surrounding austerity programmes is an example in this regard. Austerity is never enough. The myriad decisions it involves seem an expansion of micromanagement practices to ever-higher scales of governance, testing the rationality and flexibility of governance to the point that its boundary with sovereignty is blurred. Meanwhile the roots of the current economic and social turbulence remain unaddressed. The defining logics of contemporary capitalism – from the pervasiveness of debt to financialization, from the precarization of work to the penetration of entrepreneurial rationality into the institutional management of welfare and migration – are far from being challenged. On the contrary, they are being intensified and entrenched. In this article we highlight some of the main aspects of these logics, examining the intersection of finance, extraction and logistics. These three sectors of economic activity play a central role in shaping contemporary capitalism and therefore are important sites for the analysis of more general tendencies in its development. Global operations These tendencies are shifting the analytical as well as the political ground on which the crisis is being addressed. If we think about the ‘flash crash’ of 6 May 2010, for example – when the Dow Jones Industrial Average plunged by around a thousand points within minutes and then recovered equally quickly – we understand something about the peculiar temporal scrambling of crisis and recovery that permeates financial capital markets in an age of algorithmic trading and fiscal cliffs. This pattern of volatility has not only become a defining feature of finance; it also signals the acceleration and deepening of processes that disseminate uncertainty into the time and fabric of social life. The very idea of a ‘recovery’ seems to be shattered when the rationality of capitalism is dominated by financial instability and the attempt to make it productive. [2] When the history of these shifts is written, it is likely that they will appear as neither linear nor cyclical because the temporality of finance, distinctly oriented to the future, exists in discrepant and arrhythmic relation not only within itself but also to the temporalities of other economic and social orders. The struggles and revolts born of the social unsustainability of the crisis and its austere response will doubtless inform this historiography. We turn to these struggles and revolts to situate the continued stakes of subjectivity involved in the operations of capital, in its networks, assemblages, codes and algorithms. In our forthcoming book, Border as Method, or, the Multiplication of Labor, 3 we argue that borders remain central to the heterogeneous organization of space and time under global capital. Understanding the border in a wide sense, by no means limited to the conventional geopolitical line, including for instance urban divides and the limits surrounding ‘special economic zones’, provides a means of grasping the changing composition and diversification of labour. Although in this book migration and border struggles are the focus, the approach we develop to issues of accumulation, dispossession and exploitation has a more general field of application. The current proliferation of borders appears as intimately related to the expansion of what we call the ‘frontiers of capital’. This term, used by the anthropologists Melissa S. Fisher and Greg Downey, [4] registers capital’s drive to continuously open up new territories (in both the literal and the figurative sense) to re-establish the conditions for accumulation. It is precisely this moment of ‘opening up’ that interrupts the linear temporality of transition or development and calls for the repetition of ‘so-called’ primitive or originary accumulation, [5] challenging existing boundaries and disrupting established social relationships. Such an opening cannot be separated from new bordering processes, from the differentiating and hierarchizing effects of borders, and from the articulation of heterogeneous spaces and regimes that borders facilitate. A political analysis of the global crisis and the struggles that have emerged within it must take account of the unevenness and patchwork character of its effects and dynamics. Among the tendencies underlying the crisis are the shattering of old spatial hierarchies, the reshuffling of geographies of development, and the emergence of new regionalisms and patterns of multilateralism. In many parts of the world, in China no less than in Latin America, official rhetoric presented the crisis as an historical ‘opportunity’, at least until it had to confront the ‘reality check’ of slowing growth rates, impending real-estate crisis, monetary turmoil and mounting social struggles. The ‘Arab Spring’, the indignados and the Occupy movement have dominated headlines across the North Atlantic and Middle East. But it is important not to forget the resistance of peasants and indigenous groups against dispossession of land in the wake of the spread of soy, palm oil, shrimp farming, mining, industrial development and ‘new towns’. Equally we must remember the resistance of the poor against the economies of urban extraction surrounding slums and the many struggles, both spontaneous and organized, which have sprung up in the world’s factories and sweatshops over the past five years. If these dispersed and often localized struggles lack the iconic status of Zuccotti Park or the Kasr Al Nile Bridge in Cairo, they nonetheless supply important coordinates on the map from which we can begin to read the spatial economy of the crisis. Needless to say, this is an economy of shifting scales and proliferating borders. New kinds of ‘global territory’ such as free zones and corridors are springing up. [6] Meanwhile, as anthropologist Anna Tsing argues, the presence of ‘nonscalable’ elements, such as resource patches that cannot be torn from their locations, means that capital must continue to wind in and out of scalable relations. [7] For over thirty years Deleuze and Guattari’s trope of ‘deterritorialization’ has been central to critical discussions of global space and its capitalist axiomatic. Recently, however, there has emerged a tendency to focus attention once again on the question of territory. [8] As understood in these discussions, territory is not necessarily or not only associated with the sovereign space of the state. Rather, it is seen as a political technology for organizing social and economic relations that has both spatial and non-spatial elements. We want not so much to participate in this return to territory as to ask, of what it is symptomatic? Clearly financialization is relevant here. There is a materiality of finance that escapes attempts to describe it with abstract metaphors such as flows and volatility. The global city and the offshore banking zone are two very obvious instances of how finance hits the ground. But it is also possible to foreground some less obvious cases of finance’s entanglement with territory which begin to expose the limits of financialization as a self-sustaining movement. One has only to consider the strategic link between financial capital and global economies of extraction to understand how the political technology of territory is no longer driven solely by sovereign imperatives. The legal unity of territory is challenged and exploded by not only the multiplication of resource extraction ‘enclaves’ [9] but also the proliferation of partial legal regimes, technical standards, ‘best practices’ and sectorally limited normative arrangements. [10] In the mining industry, the relations of transnational companies with indigenous and other local populations are filtered by protocols of corporate responsibility that stipulate the parameters within which the place-bound business of mineral extraction can deal with environmental, cultural and even religious contestations. This is often not sufficient to eliminate the production of violent struggles on the ground, but it means that corporate entities have to enter into unstable alliances and often negotiations with public institutions and other actors to adapt to contingencies to enable the resource extraction to go ahead. Power is not merely channelled into territory from above but assembled in haphazard and often enduring ways. A prevalent means of theorizing such power relations draws on network models that emphasize non-totalizing and relational aspects of the social.We are not without sympathy for these network and assemblage approaches that insist upon tracing the multiple and shifting relations that compose any social entity or form. [11] But we are wary when such approaches are marshalled in ways that deny analytical validity to the category of capital. It does not take much to realize that capital itself functions in processual ways. Capital is not a thing but ‘a social relation between persons which is mediated by things’. [12] Speaking of the continuous repetition of ‘so-called primitive accumulation’ leads us to posit the question of the production of the subjects that enter into the social relation that capital is. The production of subjectivity is a terrain of struggle in the actual workings of capitalism. Fear of falling into the subject–object relationship tends to ~~blind~~ [distract] some network and assemblage theorists to these dynamics. The subject disappears, to be replaced by the actor or the agent, and the interplay of material forces that make assemblages and networks productive tends to be overlooked. The object emerges as the ontological orientation of the moment and the rupture of social relations and established forms of subjectivity connected with the operations of capital are obscured by a logic that turns the subject into just another thing. However, the reproduction of capital as a social relation is predicated upon profound, violent and contested dynamics that reshape the subjectivity of the dominated and exploited. Fundamental dissymmetry and antagonism are factors in the material constitution of any network or assemblage. Attention to the subjectivity of labour is crucial in this regard. Stefano Harney has described recent developments of network and assemblage theory as a ‘becoming logistical of philosophy’. [13] Such theoretical approaches have come to the fore at precisely the moment in which capital’s building of global connections has assumed a new salience. What Marx called the mediation of social relations ‘by things’ is nowadays the object of the flourishing management science of logistics. Seeking to introduce efficiencies into transport and communication practices, logistics involves the algorithmic coordination of productive processes in space and time. Recognizing the increasing role of logistics in the organization of global circuits of accumulation need not lead to being hypnotized by its magic of connecting and generating networks. Assembly and supply chains provide a strategic empirical focus for studies that seek to unearth the unbalanced and contentious relations that animate networked processes of production and the logistical operations that sustain them. However, gleaning logistics handbooks and exploring the software codes that drive logistical transactions do not supply a ready-made theoretical framework for the political interpretation of the operations at stake. We do not know what an operation can do, we might ironically say. Producing such a theoretical framework is one of the most urgent intellectual tasks of the day. Tales of extraction Let us move to an example that lays bare the relation between extraction, finance and logistics. Australia is a nation whose government likes to boast that it managed to avoid the worst of the global economic crisis due to its fiscal policies and booming export of primary materials, primarily to China. Now that resource commodity prices are falling with the slowdown in China, there is a search for new mineral wealth that might sustain the economy in the uncertain times ahead. Among the most hyped of the new resource commodities are so-called ‘rare earth’ elements, such as Europium and Lanthanam. The Mount Weld mine, near Laverton in Western Australia, is a rich source for these minerals, which are used in the miniaturization of components for electronic goods and as phosphors to create colour in television, computer and mobile phone screens. [14] Although rare earth elements are relatively abundant in the earth’s crust, they are rarely present in economic concentrations. They do not occur as free metals but as part of an ore that is always found alongside the radioactive elements uranium and thorium. This means that the process of separating rare earth elements for commercial use involves the production of radioactive tailings. Unsurprisingly, the disposal of this radio active waste poses a threat to the long-term well-being of populations that live in the vicinity of sites where such operations are carried out. But the economic incentives for the extraction and processing of rare earth elements are high. Given their essential role in the hardware that enables contemporary forms of digital capitalism, demand for these minerals is unlikely to decrease. Indeed there has been much public discussion, particularly in the United States, about a forecast shortage of these rare earth minerals. While China has been a major supplier, internal demand and price-setting manipulations have led to a decrease in Chinese exports. In 2011 a global supply deficiency of rare earth minerals led to a massive price hike, leaving manufacturers along the supply chains for computers and other electronic goods with depleted inventories. This price rise, amid the general downturn in the resource commodities market, is one reason why Lynas Corporation, the owners of the Mount Weld mine, have pushed aggressively to complete the construction of an Advanced Minerals Plant for the processing of rare earth elements near the port of Kuantan in Pahang, Malaysia. We can see here the emergence of a tight series of relations between extraction, logistics and financialization within the ruptured time and space of the global crisis. The financial manipulation of the rare earth commodity price drives new processes of mineral extraction. In turn, there is a need for the logistical coordination of the rare earth supply chain, which in turn feeds into the supply chain for electronic goods, between Australia and Malaysia. Areas such as Pahang set themselves up as logistics hubs, placing themselves on the map of global production by building tight networks of transport and communication between modern port facilities and special economic zones where the dangerous business of processing the rare earth elements, as well as their efficient transfer to electronics manufacturing facilities, can be accomplished. But, as we shall see, these processes of logistical coordination also place Pahang on the map of global struggles. The building of the Lynas Advanced Minerals Plant in the Gebeng Industrial Estate near Kuantan has prompted myriad social conflicts, especially in the wake of a Malaysian High Court decision allowing the import of rare earths and their processing to go ahead. Protestors have conducted a 300-kilometre walk between Kuantan and Kuala Lumpur, staging a rally of 20,000 people in the capital city at the end of this journey. Furthermore, the resonances of the Stop Lynas campaign have spread across the Asian region, with solidarity movements operating in Australia and Taiwan. In this instance, as in the others we will discuss shortly, the cocktail of extraction, logistics and financialization gives rise to social antagonism within the networked systems of global capitalist production. Such conflict has been pronounced in Latin America, where the intensification of economies of extraction has been central to the development of capitalism in recent years. Mapping the global landscape of extraction confronts us with a wide array of peculiarities and changing economic as well as political circumstances. What makes the Latin American instance particularly instructive is the connection between the stretching and intensification of extractive dynamics and the presence of a series of ‘progressive’ governments that have associated these dynamics with the need to use resources for new social policies that address the needs of the most vulnerable and poor sectors of society. While this has prompted the continuity of a developmental pattern rooted in the colonial history of the region, according to which ‘progress’ is only accessible through the ‘selling of natural resources’, some major shifts have occurred. Argentina, once ‘the world’s granary’, is today a major exporter of commodities (soy and minerals). Ecuador has moved from cocoa to oil as its main economic resource. Bolivia, in the past a global hub for the extraction of silver and tin, is today primarily exporting natural gas. [15] Perhaps more importantly, the prominence of indigenous movements and struggles in the multifarious contestations of neoliberalism that laid the basis for the formation of ‘progressive’ governments in several Latin American countries is reflected in the acknowledgement of the principle of buen vivir (‘living well’) in the new constitutions of Ecuador (2008) and Bolivia (2009). This is only the most visible sign of the influence of discourses of ‘postdevelopment’ in contemporary Latin America. In such a situation, the recent radicalization of extractive tendencies can be seen as a kind of detachment of the imperatives of ‘development’ from the principle of buen vivir, which had been widely understood (not only within indigenous movements) as a critical spur to the search for alternatives. [16] One has only to think of recent conflicts surrounding the cultivation of soy in the north-western Argentine province of Santiago del Estero or the extraction of oil in the Peruvian Amazon to get a sense of the violence and processes of dispossession at stake here. At the same time there is a need to stress that the nature of the political conjuncture in Latin America opens up spaces of legitimacy and recognition for struggles against extraction and the contestation of big ‘developmental’ and infrastructural projects. New alliances and convergences are in the making, connecting remote sites in the country or the forest with metropolitan spaces and articulating resistance on transnational scales. The state itself, whose ‘return’ is celebrated by the official rhetoric of ‘progressive’ governments, [17] has recuperated old tasks it had been stripped of in the age of the ‘Washington Consensus’ and developed new institutional capacities of regulation and even, in certain cases, of distribution. But as one of the keenest critical analysts of extraction in the region has maintained, the return of the state as regulator installs itself within a space of variable geometry, which means within a multi-actor scheme (marked by a complexification of civil society through social movements, NGOs and other actors), but at the same time in tight association with multinational private capitals, whose weight in national economies is growing more and more. [18] All these tendencies are clear both in the case of extraction in the narrow sense of the word and in instances of the expansion of the frontiers of capital correlated with more elusive but no less intrusive means of extraction. In the case of the attempt to open up favelas and slums to the combined intervention of finance capital and real-estate investment, particularly evident for instance in Rio de Janeiro on the eve of the 2014 World Cup and the 2016 Olympics, the resistance to the ‘removal’ of the poor can mobilize the political legitimacy acquired in the years of the Lula governments and the social power manifest in an unprecedented access to consumer opportunities. It can also play within and against the ‘space of variable geometry’, to recall Svampa’s phrase, in which the state is enmeshed. [19] Nevertheless it is necessary to emphasize that this space is also a space of capital. Finance, in particular, is not only involved in this dense materiality of struggle in so far as its role is pivotal to the ‘valorization’ of urban spaces inhabited by the poor. A boom of consumer credit is already evident in several Latin American countries as a trend accompanying social policies that do not seem to point towards a diminution of the high degrees of informality and precarity that shape working lives. In the case of the subprime crisis of 2007–08 in the USA we became aware, Saskia Sassen writes, that ‘the financial sector invented some of its most complicated financial instruments to extract the meager savings of modest households in order to produce an “asset” – the mortgage on a house.’ [20] It is likely that the 2 billion modest-income households worldwide charted by Sassen will constitute ‘one of the new global frontiers for finance’ [21] and that subprime mortgages and other technical innovations will spur the extractive dimension of finance worldwide. The apparatus of student debt is another of these frontiers. [22] Does this mean that the global crisis will merely create the conditions for the global extension of the same trends that have been widely recognized as its trigger? And, as far as Latin America is concerned, will ‘post-neoliberalism’ simply coincide with the age of a ‘disciplinary democracy’, [23] with an internalization of the economy of debt and a synchronization of the return of the state with the new pace and needs of capitalist accumulation? While we need to stress these elements of continuity and the ongoing pressure of capital, we must also be attentive to the continuous if fragmented generation of struggles, which are particularly intense on the frontiers of its expansion. Differential accumulation Given their pervasiveness and prevalence in the global present, extraction, logistics and finance provide strategic points of focus. Finance permeates the rationality of capitalism as a whole, linking abstract processes of control and manipulation to changing forms of production, to the life of entire populations, and to the formalization of anthropological relations into monetary standards and conventions. Extraction provides the raw materials that drive capital’s creative destruction, whether it involves mining, land grabbing, extensive cultivation of cash crops, gentrification of urban neighbourhoods, or the continuous pressure placed on human activity and life to transform it into a source of value. Logistics is the art and science of building networked relations in ways that promote transport, communication and economic efficiencies. Stemming from military practices, it organizes capital in technical ways that aim to make every step of its ‘turnover’ productive.

#### BUT, neoliberalism fascism has run out of places to expand this accumulation – Biden’s neoliberalism is just a safety valve for colonize desire that cannot imagine alternatives to a collapsing system. Enter Outer Space, the final frontier, the accumulation of the ultimate terra nullius where desire saturates the Adventureland that NASA and Elon Musk both imagine as space. The stakes are the inevitable stripping the earth and its peoples to fuel this endless expansion of the market into the cosmos.

#### Thus, in response to the unjust appropriation of outer space by private entities, I affirm global orbital counter-operations

#### Outer space policy theorized through histories of racial capitalism can only ever produce another launch site on stolen land. Instead, our response must tie the materiality of orbital counter insurgency to a worlding practice that can intervene in the NewSpace Race. Counter-operations repurpose space infrastructure against its progenitor, tying insurrectionary violence to prefiguring experimentation in alternative modes of socio-political organization. Counter-operations sabotage the systems of accumulation, blockading the operations of logistics and hacking the networks of communication to world new worlds.

Mezzadra and Neilson, 13 (Sandro Mezzadra, Associate Professor of Political Theory at the University of Bologna, where he teaches postcolonial studies and contemporary political theory; Brett Neilson, Professor, Institute for Culture and Society; “Extraction, logistics, finance: Global crisis and the politics of operations,” https://www.radicalphilosophy.com/article/extraction-logistics-finance)

The politics of operations What is an operation? In our understanding an operation is something more than a relation of cause and effect or a model driven by linear processes of input and output. Throughout this article we have utilized the concept to name and analyse the syncopated pace of opening and closure that gives texture to and counterpoints the heterogeneity of space and time under global capitalism. In elaborating her famous distinction between labour and work, in The Human Condition, Hannah Arendt was well aware of the etymological nexus associated with the Latin opus. For Arendt ‘labour’ relates to the life or biologically necessitated dimensions of the human metabolism and reproduction. By contrast ‘work’ is inherently connected with the fabrication of an ‘“artificial” world of things’ that endures beyond the act of creation. [35] While Arendt associates the rise of industrial modernity with the encroachment of labour over work and its consequent effects of alienation, we wish to register the continuing role of the operation in the global present. But while for us an operation is connected with the fabrication of an ‘artificial’ world, it does not necessarily produce a ‘work’, a material ‘thing’. Operations also play a role in activities of finance and extraction. Think of the crane that lifts a container full of soy from a ship to a truck, the software-driven coordination of forklift vehicles in a fully wired warehouse, or the transmission of financial data through electronic networks by means of packet switching technologies. What is produced in these operations is not a ‘thing’ but rather a set of links or relations between things, which is to say the framework or skeleton of a world. In our use of the term, an operation refers primarily to this fabrication of the world, to the production of the connections, chains and networks that materially envelop the planet enabling and framing the labour and action of subjects well beyond those directly involved in the execution of the operation itself. In observing the ways in which such linkages are made we are observing the operations of capital. Aside from the material infrastructures required to establish such articulations, there is a need for rules, instructions and standards that guide and frame the operative principles at stake in these dynamics. Increasingly the frameworks and processes that enable the deployment of these operative principles are organized by means of computer code. More than a set of executable instructions or a means of information exchange, code alters conditions of perception, communication and representation. It participates heavily in the economic, political, military and governmental domains, organizing and disrupting relations of power and collective life. The code that governs activities of finance, extraction and logistics introduces the social relation of capital into the most minute and detailed of operations. Capital’s code, we might say, insinuates itself into the world of operations, embedding itself as a kind of organizing element or blueprint. Returning to the terminology of Arendt, the boundary between ‘labour’ and ‘work’ appears blurred in the operations of capital. At the same time, we have to recognize that some of the key features of ‘action’, the third concept discussed by Arendt, play an important role in the operations of capital, making them politically pregnant. This is to say that these operations are increasingly confronting the elusiveness, plurality, relationality and unpredictability of the ‘human condition’, which comprised for Arendt the domain of ‘action’. It thus makes sense to speak of a politics of the operation, taking into account both its structuring effect on human relations and the ways in which work, labour and action are combined both in the execution of specific tasks and in the articulation of different subjects that make operations possible. What we are calling operations of capital are a privileged field of surveillance and control. The rise of sophisticated performance measurement techniques makes it possible to monitor labour in real time. Data produced on the basis of such measurement can be fed back into production systems in order to adjust them accordingly. Traditional forms of workplace action are thus disrupted. Consider the worker who deliberately slows down. Not only can she be easily identified, but the effects of her foot-dragging can be minimized through computerized processes of system adaptation. Performance measurement is increasingly tied to algorithmic patterns and processes that give the operation a life of its own. We need to ask how the operation relates to performance and what the significance of this relation is in a situation where the operation threatens to detach itself from its performer. Is the operation a kind of paradigm of pure performativity? The concept of performativity has been at the centre of many recent debates about and approaches to the political. An important feature of the performative is its self-referring function – it constitutes that which it enunciates. The operation, by contrast, connects. It fabricates a world but does not do so only in relation to its own premisses. Its ontological moment is thus quite different to that of the performative, even if it retains a performative dimension. The operation has an outside, albeit constrained by parameters of connection and adaptation. The performative is self-contained, even if its affective dimension can trouble this containment. In the case of the operation, its politics registers the interaction between its inside and outside, between the protocols and standards that allow it to build connections across different situations and the heterogeneity of space and time in which it subsists. Only by thinking through these dynamics, which it is important to insist are productive of struggles and subjectivity, can we begin to understand how the Arendtian realm of action is increasingly folded into the worlds of work and labour. There is another sense in which the operation differs from its performance. This is the sense in which the operation is effectual rather than performative, the sense in which it is productive of something other than itself. We can think of the operation as a kind of interval: at one end lies that which initiates or triggers it, and at the other end lies that which it creates. While in reality these two aspects of the operation concatenate, in so far as one operation spurs another, it is instructive to consider the situation in this way to shed light on what unfolds between these moments of concatenation, which is to say on the time and space of the operation itself. We have already stressed the nonlinear and uneven nature of the operation. What we now want to emphasize is how thinking through these knotted relations gives us a different perspective on the theorization question of politics today. If the operation’s trigger or spur recalls a performative approach to politics, its creative capacities can be correlated with a version of politics that centres on the event. There is a temporality to the operation that cannot be separated from the temporality of politics. There is also a striking parallel between a politics of the event and the image of an operation that stresses only its generative outcome, particularly as regards the punctuated nature of time characteristic of both. While a focus on the performative aspects of the operation obscures the moment of connection, disconnection and friction generated through the articulation with its ‘outside’, a focus on its outcome does not shed light on the complex materiality of the operation, on the internal as well as external conditions of its effectiveness. Thinking of the operation in terms of its interval, which it is important to stress is only a heuristic approach, allows us to begin to specify in more philosophical terms what we mean by the politics of operation. We do not equate a causal notion of the operation with the moments of performance and event. The politics of performativity can never be correlated with the linearity of a cause; nor can the event be reduced to an effect. But once we begin to understand the workings of the operation beyond the mechanism of cause and effect, we enter an ontological and epistemological domain in which the questions of performativity and event become relevant. For now we limit ourselves to some brief comments on how such a politics diverges from what Giorgio Agamben, following Jean-Luc Nancy, terms an ethics of ‘in operativity’. [36] Such an ethics is supposed to signal a radical deactivation of the operation that is held in the tension between potentiality and activity. Inoperativity corresponds to the possibility inherent in potentiality that an activity has not realized. For Agamben, this suggests a way of living ‘without purpose’ since it refuses an orientation towards ends or outcomes. [37] This is not the occasion to explore Agamben’s theological derivation of the concept of inoperativity. [38] Suffice it to say that it suggests a style of politics that seems rather contemplative. Agamben explicitly contrasts a politics based on in operativity with ‘the ingenuous emphasis on productivity and labour that has long prevented modernity from accessing politics as man’s most proper dimension’. [39] Arguing that subjectivity ‘opens itself as a central inoperativity in every operation’, he develops what one of us has previously described as a ‘politics without action’ and an ‘economy without labour’. [40] By contrast, what we are calling the politics of operation involves the coalescing of action, labour and work and attempts to imagine processes of antagonism rooted in the production of subjectivity, implied by such coalescing. The interval of the operation not only separates it from the moments of performance and event; it also establishes a mesh of connections that challenge boundaries between ways of living, ways of earning a living and the fabricating of worlds. Considering the operation from the point of view of its interval operates like a freeze-frame that brings into relief the combination of social activities, technical codes and devices that make an operation possible, while at the same time it allows us to look at the outcome of the operation without taking it for granted. This means that there is a need analytically to suspend the role played by the operation in the fabrication of the world in order to grasp the tensions and conflicts produced by the encounter of the operation with its ‘outside’. It is through this suspension that other ways of fabricating the world become theoretically visible and the politics of operation can give way to the forging of ‘counter-operations’. These differ fundamentally from an ethics of inoperativity. While inoperativity implies a withdrawal from productivity and a gestural ethos of play, counter-operations involve targeted action within existing networks of production. Crucial to their effectiveness, which is to say to their ability to fabricate a world, is the political task we have already mentioned of determining the time and space in which to focus the organization of struggles. In this regard, knowledge of the interlinked operations of logistics, finance and extraction is decisive. Between the expansion of capital’s frontiers and its drive to closure, the workings of differential accumulation produce an excess of labour that can no longer be contained by traditional models of technical or political division. Here the production of subjectivity meets what we earlier described as the intensification of labour, its multiplication beyond the wage relation and its explosion of established legal and social statuses. Under these conditions, political organization must establish forms of coordination and solidarity that reach across these multiple lines of division, ranging across borders at different geographical scales and keeping in view the way supply chains, financialization and extractive economies overlap. A movement like Occupy Wall Street, which boldly challenged finance capital by taking hold of its territorial and symbolic heartland, is probably not enough. It needs to connect to struggles that confront capital’s logistical and extractive logics, such as those conducted in ports and mines that we discussed earlier. This is not to valorize horizontal, networked or communicative modes of organization at the expense of vertical structures that can help ensure discipline and continuity. There are still lessons to be learned from historical episodes of party, trade-union and internationalist organization. Elsewhere, we have argued that contemporary efforts of political organization need to grapple with what, following Gramsci’s interpretation of a famous speech by Lenin, we call the question of ‘translatability’. [41] This means these efforts need to come to terms with the deep rooting of struggles in material networks and settings. It also means they have to devise strategies for dealing with the untranslatable aspects of struggles, which expose the limits of communication, tear established political subjectivities away from themselves, and provide an unstable ground on which to open new horizons of organization. We have in mind a similar process of politicization when discussing counter-operations. In this sense, the counter-operation is something more than an act of sabotage. Undoubtedly, sabotage remains one of the primary ways in which the generative claims and actions of subjects within and against the social relation of capital can be realized. To be sure, sabotage has a long history, within which the activities of early-twentieth-century dock workers, miners and railwaymen documented by Émile Pouget figure prominently. [42] What has become more pronounced within current systems of extraction, financialization and logistics is the capacity for capital to route around episodes of disruption. Although we still might assert with Antonio Negri that ‘self-valorization is sabotage’, [43] it has become more urgent to coordinate struggles across the heterogeneity of global time and space. Isolated conflicts may register subjectivity’s excess over the networks of subordination within which they are situated, but their ability to ‘leap vertically’ and challenge capital on the global level (as Hardt and Negri wrote over a decade ago now) [44] has been curtailed. What is needed are new models of solidarity that can negotiate difference across the fractured geographies of globalization, taking into account and finding alternative paths to the socio-technical systems and assemblages that enable current processes of financialization, extraction and logistics. We thus speak of counter-operations both as a way of registering the constitutive moment of struggles, which can easily get lost if one focuses only on the ‘negative’ moment of sabotage, and as a thread along which the vested question of organization can be tested and rethought. It is important to stress that speaking of counteroperations does not imply a simply reactive use of ‘the master’s tools’ in order to prompt practices of resistance. It involves an accurate analysis of the processes of dispossession and exploitation that crisscross the operations of capital and an attempt to build new forms of political organization capable of combining struggles and multiplying their affirmative aspects. This is the chance that exists within the moment, the political decision that would make the crisis worthy of its name.