# Speech 1AC Strake Rd 2 vs Dulles 12-17 4PM

### Part 1 is Racial Capitalism

#### All Capitalism is Racial Capitalism – the space commercialization cannot sustain itself without disposable populations which is a priori unjust

Burden-Stelly 20 [Bracketed for women to womxn. Footnote 14 is inserted below the paragraph it’s cited in, other footnotes excluded for readability. Charisse Burden-Stelly (Visiting Scholar in the Race and Capitalism Project at the University of Chicago. She is currently an African-American Assistant Professor of Africana Studies and Political Science at Carleton College). “Modern U.S. Racial Capitalism: Some Theoretical Insights”. The Monthly Review, Volume 72, Number 3. 7/1/20. Accessed 11/3/21. <https://monthlyreview.org/2020/07/01/modern-u-s-racial-capitalism/> //Xu]

Drawing on the intellectual production of twentieth-century Black anticapitalists, I theorize modern U.S. racial capitalism as a racially hierarchical political economy constituting war and militarism, imperialist accumulation, expropriation by domination, and labor superexploitation.14 The racial here specifically refers to Blackness, defined as African descendants’ relationship to the capitalist mode of production—their structural location—and the condition, status, and material realities emanating therefrom.15 It is out of this structural location that the irresolvable contradiction of value minus worth arises. Stated differently, Blackness is a capacious category of surplus value extraction essential to an array of political-economic functions, including accumulation, disaccumulation, debt, planned obsolescence, and absorption of the burdens of economic crises.16 At the same time, Blackness is the quintessential condition of disposability, expendability, and devalorization. [Footnote 14]: Another feature of modern U.S. racial capitalism is property by dispossession. In Theft Is Property! Dispossession and Critical Theory, Robert Nichols draws on the experience of Indigenous peoples in the United States, Canada, and New Zealand to theorize how the “system of landed property” was fundamentally predicated on violent dispossession. While the Anglo-derived legal-political regimes differed in these localities, the “intertwined and co-constitutive” material effects converged in the legalized theft of indigenous territory amounting in “approximately 6 percent of the total land on the surface of Earth.” Such dispossession, Nichols notes, is recursive: “In a standard formulation one would assume that ‘property’ is logically, chronologically, and normatively prior to ‘theft.’ However, in this (colonial) context, theft is the mechanism and means by which property is generated: hence its recursivity. Recursive dispossession is effectively a form of property-generating theft.” As such, theft and dispossession, through property regimes, are an ongoing feature of the Indigenous reality of modern U.S. racial capitalism. Robert Nichols, Theft Is Property! Dispossession and Critical Theory (Durham: Duke University Press, 2020), 50–51. My operationalization of capitalism follows Oliver Cromwell Cox’s explication in Capitalism and American Leadership.17 Modern U.S. racial capitalism arose in the context of the First World War, when, as Cox explains, the United States took advantage of the conflict to capture the markets of South America, Asia, and Africa for its “over-expanded capacity.”18 Cox further expounds upon this auspicious moment of ascendant modern U.S. racial capitalism thus: By 1914, the United States had brought its superb natural resources within reach of intensive exploitation. Under the stimulus of its foreign-trade outlets, the financial assistance of the older capitalist nations, and a flexible system of protective tariffs, the nation developed a magnificent work of transportation and communication so that its mines, factories, and farms became integrated into an effectively producing organism having easy access to its seaports.… [Likewise,] further internal expansion depended upon far greater emphasis on an ever widening foreign commerce.… Major entrepreneurs of the United States proceeded to step up their campaign for expansion abroad. The war accentuated this movement. It accelerated the growth of [modern] American [racial] capitalism and impressed upon its leaders as nothing had before the need for external markets.19 Relatedly, Peter James Hudson argues that the First World War fundamentally changed the terms of order of international finance, allowing New York to compete with London, Paris, and Berlin for the first time in the realm of global banking. This was not least because the Great War “drastically reordered global credit flows,” with the United States transforming from a debtor into a creditor nation.20 In addition to Latin American and Caribbean nations and businesses turning to the United States for financing and credit, domestic saving and investment patterns were altered to the benefit of imperial financial institutions like the City Bank.21 Although the United States is, to use Cox’s terminology, more a “lusty child of an already highly developed capitalism” than an exceptional capitalist power, the nation perfected its techniques of accumulation through its vast natural wealth, large domestic market, imbalance of Northern and Southern economies, and, importantly, through its lack of concern for the political and economic welfare of the overwhelming masses of its population, least of all the descendants of the enslaved.22 Modern U.S. racial capitalism is thus sustained by military expenditure, the maintenance of an extremely low standard of living in “dependent” countries, and the domestic superexploitation of Black toilers and laborers. Cox notes that Black labor has been the “chief human factor” in wealth production; as such, “the dominant economic class has always been at the motivating center of the spreads of racial antagonism. This is to be expected since the economic content of the antagonism, especially at its proliferating source in the South, has been precisely that of labor-capital relations.”23 In a general sense, racial capitalism in the United States constitutes “a peculiar variant of capitalist production” in which Blackness expresses a structural location at the bottom of the labor hierarchy characterized by depressed wages, working conditions, job opportunities, and widespread exclusion from labor unions.24 Furthermore, modern U.S. racial capitalism is rooted in the imbrication of anti-Blackness and antiradicalism. Anti-Blackness describes the reduction of Blackness to a category of abjection and subjection through narrations of absolute biological or cultural difference; ruling-class monopolization of political power; negative and derogatory mass media propaganda; the ascent of discriminatory legislation that maintains and reinscribes inequality, not least various modes of segregation; and social relations in which distrust and antipathy toward those racialized as Black is normalized and in which “interracial mass behavior involving violence assumes a continuously potential danger.”25 Anti-Blackness thus conceals the inherent contradiction of Blackness—value minus worth—obscuring and distorting its structural location by, as Ralph and Singhal remark, contorting it into only a “debilitated condition.”26 Antiradicalism can be understood as the physical and discursive repression and condemnation of anticapitalist and/or left-leaning ideas, politics, practices, and modes of organizing that are construed as subversive, seditious, and otherwise threatening to capitalist society. These include, but are not limited to, internationalism, anti-imperialism, anticolonialism, peace activism, and antisexism. Anti-Blackness and antiradicalism function as the legitimating architecture of modern U.S. racial capitalism, which includes rationalizing discourses, cultural narratives, technologies of repression, legal structures, and social practices that inform and are informed by racial capitalism’s political economy.27 Throughout the twentieth century, anti-Blackness propelled the “Black Scare,” defined as the specter of racial, social, and economic domination of superior whites by inferior Black populations. Antiradicalism, in turn, was enunciated through the “Red Scare,” understood as the threat of communist takeover, infiltration, and disruption of the American way of life.28 For example, in the 1919 Justice Department Report, Radicalism and Sedition Among the Negroes, As Reflected in Their Publications, it was asserted that the radical antigovernment stance of a certain class of Negroes was manifested in their “ill-governed reaction toward race rioting,” “threat of retaliatory measures in connection with lynching,” open demand for social equality, identification with the Industrial Workers of the World (IWW), and “outspoken advocacy of the Bolshevik or Soviet doctrine.”29 Here, anti-Blackness, articulated through the fear of the “assertion of race consciousness,” was attached to the IWW and Bolshevism—in other words, to anticapitalism—to make it appear even more subversive and dangerous. Likewise, antiradicalism, expressed through the denigration of the IWW and Soviet Doctrine, was made to seem all the more threatening and antithetical to the social order in its linkage with Black insistence on equality and self-defense against racial terrorism. In this way, “defiance and insolently race-centered condemnation of the white race” and “the Negro seeing red” came to be understood as seditious in the context of modern U.S. racial capitalism. The link between my theory of modern U.S. racial capitalism and Robinson’s catholic theory of racial capitalism, beyond his “suggest[ion] that it was there,” is vivified through the prison abolitionist and scholar Ruth Wilson Gilmore, who writes: “Capitalism…[is] never not racial.… Racial capitalism: a mode of production developed in agriculture, improved by enclosure in the Old World, and captive land and labor in the Americas, perfected in slavery’s time-motion, field factory choreography, its imperative forged on the anvils of imperial war-making monarchs.”30 Racial capitalism, she continues, “requires all kinds of scheming, including hard work by elites and their compradors in the overlapping and interlocking space-economies of the planet’s surface. They build and dismantle and reconfigure states, moving capacity into and out of the public realm. And they think very hard about money on the move.”31 Perhaps more than Gilmore, though, my approach aligns with that of Neville Alexander as described by Hudson.32 Like Alexander, who focused on South Africa, I offer a particularistic understanding of racial capitalism, mine being rooted in the political economy of Blackness and the legitimating architectures of anti-Blackness and antiradicalism in the United States. Gilmore qua Robinson offers a more universalist and transhistorical conception. Like Alexander, my theory of modern U.S. racial capitalism is primarily rooted in (Black) Marxist-Leninists and fellow travelers. This is an important epistemological distinction: whereas Robinson finds Marxism-Leninism to be, at best, inattentive to race, my theory of modern U.S. racial capitalism is rooted in the work of Black freedom fighters who, as Marxist-Leninists, were able to offer potent and enduring analyses and critiques of the conjunctural entanglements of racialism, white supremacy, and anti-Blackness, on the one hand, and capitalist exploitation and class antagonism on the other hand.33 Although Robinson draws on scholars like Fernand Braudel, Henri Pirenne, David Brion Davis, and Eli Heckscher to understand European history, socialist theory, and the European working class, the work of Black Marxists like James Ford, Walter Rodney, Amílcar Cabral, and Paul Robeson offer me those same intellectual, historical, and theoretical resources. Finally, I agree with Alexander that the resolution to racial capitalism is antiracist socialism, not a cultural-metaphysical Black radical tradition. In what remains of this essay, I will draw on the work of Black Marxist-Leninists and anticapitalists to explicate the defining features of modern U.S. racial capitalism—war and militarism, imperialist accumulation, expropriation by domination, labor superexploitation, and property by dispossession. In this, I demonstrate that their critiques and analyses offer a blueprint for theorizing modern U.S. racial capitalism. War and militarism facilitate the endless drive for profit. Military conflicts between imperial powers result in the reapportioning of boundaries, possessions, and spheres of influence that often exacerbate racial and spatial economic subjection. War and militarism also perpetuate the endless construction of “threats,” primarily in racialized and socialist states, against which to defend progress, prosperity, freedom, and security. The manufacturing of conflict legitimates the mobilization of extraordinary violence to expropriate untold resources that produce relations of underdevelopment, dependency, extraversion, and disarticulation in the Global South. Moreover, the ruling elite and labor aristocracy in imperialist countries, not least the United States, wage perpetual war to defend their way of life and standard of living against the racialized majority who, because they would benefit most from the redistribution of the world’s wealth and resources, represent a perpetual threat. Here, Du Bois’s 1915 essay, “The African Roots of War,” is instructive.34 Though he does not directly analyze the United States, he nonetheless demonstrates how racism, white supremacy, and the plunder of Africa underpinned the capitalist imperialist war that engulfed the world from July 1914 to November 1918—a war that catapulted the United States into the center of the capitalist world system. Using Du Bois’s own words, Hubert Harrison, the father of Harlem radicalism, makes the direct link: But since every industrial nation is seeking the same outlet for its products, clashes are inevitable and in these clashes beaks and claws—armies and navies—must come into play. Hence beaks and claws must be provided beforehand against the day of conflict, and hence the exploitation of white men in Europe and America becomes the reason for the exploitation of black and brown and yellow men in African and Asia. And, therefore, it is hypocritical and absurd to pretend that the capitalist nations can ever intend to abolish wars.… For white folk to insist upon the right to manage their own ancestral lands, free from the domination of tyrants, domestic and foreign, is variously described as “democracy” and “self-determination.” For Negroes, Egyptians and Hindus to seek the same thing is impudence.… Truly has it been said that “the problem of the 20th century is the problem of the ‘Color Line.'” And wars are not likely to end; in fact, they are likely to be wider and more terrible—so long as this theory of white domination seeks to hold down the majority of the world’s people under the iron heel of racial oppression.35 For Du Bois, the imperialist rivalry for the booty on offer in Africa drove Berlin’s efforts to consolidate its place in the sun by displacing London in particular. While Vladimir Lenin understood that “the war [was] a product of half a century of development of world capitalism and of billions of threads and connections,” Du Bois expanded this analysis by providing a critique of the racial foundations of capitalist expansion.36 He held that the struggle to the death during the Great War for African resources and labor had begun to “pay dividends” centuries earlier through the enslavement of African peoples, the subsequent conflation of color and inferiority, and the reduction of what was routinely referred to as the “Dark Continent” to a space of backwardness ideally suited for dispossession. He further noted that “with the waning possibility of Big Fortune…at home, arose more magnificently the dream of exploitation abroad,” especially in Africa—a dream shared by white labor and the ruling class.37 In other words, this “democratic despotism” allowed for the white working class to “share the spoil of exploiting ‘chinks and niggers,'” and facilitated the creation of “a new democratic nation composed of united capital and labor” that perpetuated racial capitalism across class lines.38 Moreover, this national unity was strengthened through the disrespect and dehumanization of the racialized toilers and peasants in the plundered colonies that mitigated the exploitation and impoverishment of the white working class in imperial countries. This superexploitation allowed white workers to get a share, however pitiful, of “wealth, power, and luxury…on a scale the world never saw before” and to benefit from the “new wealth” accumulated from the “darker nations of the world” through cross-class consent “for governance by white folk and economic subjection to them”—a consensus solidified through the doctrine of “the natural inferiority of most men to the few.”39 Given the entanglement of racialization and capitalist exploitation, Du Bois averred, “Racial slander must go. Racial prejudice will follow…the domination of one people by another without the other’s consent, be the subject people black or white, must stop. The doctrine of forcible economic expansion over subject people must go.” Insofar as this admonishment applied as much to the United States as to European imperialists, beyond the international proletariat, it was the darker peoples and nations of the world who would challenge racial capitalism, not least “the twenty-five million grandchildren of the European slave trade…and first of all the ten million black folk in the United States.”40 Imperialist accumulation denotes the rapacious conscription of resources and labor for the purpose of superprofits through violent means that are generally reserved for populations deemed racially inferior. On the precipice of the Great Depression, the prominent Black communist James Ford beautifully explicated imperialist accumulation. In his 1929 report on the Second World Congress of the League Against Imperialism, he explained that the extant political economy constituted the consolidation of Africa’s partition and the “complete enslavement of its people”; the arresting of its industrialization, which hindered the development of the “toiling masses”; and the relegation of the continent to a source of raw material, a market for European goods, and a dumping ground for accumulated surplus capital. In the U.S. South, the Black poor were dehumanized by Wall Street, “white big business,” and the “rising Negro bourgeoisie” whose condition of possibility was the subjection of the Black working class. This oppression was exacerbated by rigid racial barriers, disenfranchisement, and lynching. Ford further argued that the West Indies, subjected to U.S. militarism and occupation on behalf of Wall Street, were largely transformed into a marketplace for U.S. goods. Moreover, throughout Africa, the U.S. South, and the Caribbean, Black workers were impressed into forced labor, laying railroads, building roads and bridges, and working in mines; were entrapped on plantations through peonage; and were subjected to convict leasing. In addition, they suffered intolerable working conditions and routinized violence.41 Expropriation by domination designates the seizure and confiscation of land, assets, property, bodies, and other sources of material wealth set to work by relations of economic dependence. This relationship exists both between nations and between groups. A quintessential enunciation of expropriation by domination between groups is We Charge Genocide: The Historic Petition to the United Nations for Relief from a Crime of the United States Government Against the Negro People, edited by the Black Communist William Patterson (with significant help from his wife and comrade Louise Thompson Patterson) and submitted to the United Nations by the Civil Rights Congress in 1951.42 The petition meticulously documented the past and present expropriation of Black people by the ruling class of modern U.S. racial capitalism through consistent and persistent discrimination in employment, unfair wages, forced ghettoization, inequitable and inferior accommodation and services, and the denial of justice in the courts. It further argued that this process was sustained by genocidal terror, white supremacist law, and the drive of monopoly capitalists for superprofits. Importantly, We Charge Genocide noted that, for primarily economic reasons, the historical and geographical locus of anti-Black genocide was the “Black Belt” of the Southern United States, a region expropriated by the Northern industrial capitalists and by Southern landowners alike. This was due in large part to plantation systems of sharecropping and peonage—legacies of slavery—in which Black political and economic rights were virtually nonexistent, Black laborers were inexorably tied to the land through debt, and the threat of violence and death precluded demands for justice. For Patterson, such expropriation by domination was the basis of “racist contamination that has spread throughout the United States.”43 We Charge Genocide further conveyed that expropriation by domination, a central element of modern U.S. racial capitalism, was more than a domestic concern because such practices “at home must inevitably create racist commodities for export abroad—must inevitably tend toward war.”44 Labor superexploitation can be understood as an economic relationship in which the intensity, form, and racial basis of exploitation differs little from slavery. Its effects are so extreme that it pushes racialized, particularly Black, labor effectively below the level of sheer physical subsistence. As Harrison explained, in the context of modern U.S. racial capitalism, Black workers “form a group that is more essentially proletarian than any other American group” because enslaved Africans were brought to the “new world” to be ruthlessly exploited. This reality fixed their social status as the most despised group, which in turn intensified their subjection.45 Likewise, organizations like the American Negro Labor Congress and the Anti-Imperialist League analyzed that the racial capitalist superexploitation of Black nations like Haiti in the first quarter of the twentieth century for the purposes of consolidating Wall Street control over land, commercial relations, and production was accompanied by the brutalization of Black labor, the export of Jim Crow practices, military occupation, and political repression.46 In effect, superexploitation results from the conjuncture of white supremacy, racialization, and the “badge of slavery,” which exacerbates the conditions of exploitation to which white working classes are subjected. As the Black Marxist Harry Haywood argued in 1948, “the stifling effects of the race factor are most strikingly illustrated by the drastic differences in the economic and cultural status of Negroes and whites.… Beyond all doubt, the oppression of the Negro, which is the basis of the degradation of the ‘poor whites,’ is of separate character demanding a special approach.”47 Superexploitation, he explained further, constitutes a combination of direct exploitation, outright robbery, physical violence, legal coercion, and perpetual indebtedness. It stifles “the free economic and cultural development” of the Black masses “through racist persecution as a basic condition for maintaining” virtual enslavement.48 The entrapment of Black [womxn] women in domestic labor throughout the twentieth century—a function of their “triple oppression”—is perhaps the most glaring example of labor superexploitation under modern U.S. racial capitalism. In 1936, the lifelong Black radical Louise Thompson explained that Black women’s superexploitation in the capitalist mode of production was based on their race, sex, and subordination in the labor market.49 That same year, Black militants Marvel Cooke and Ella Baker published an article titled “The Bronx Slave Market” in which they studied triple oppression as it related to Black domestic workers. Cooke and Baker explained that the entanglements of racism, sex-based labor subordination, and structural poverty were deeply intensified by the Great Depression and forced Black domestic workers to pauperize their labor for the abysmal wage of less than thirty cents an hour. This form of labor exploitation was unique to the female sex because domestic work was conventional “women’s work,” and it was racialized insofar as the denigration of Black people fitted this group of women for low-wage, unprotected, and contingent labor.50

**Resource competition and wealth extraction under Racial Capitalism produces fascism, endless war and environmental destruction**

Robinson 14(William I., Prof. of Sociology, Global and International Studies, and Latin American Studies, @ UC-Santa Barbara, “Global Capitalism: Crisis of Humanity and the Specter of 21st Century Fascism” The World Financial Review)

Cyclical, Structural, and Systemic Crises Most commentators on the contemporary crisis refer to the “Great Recession” of 2008 and its aftermath. Yet the causal origins of global crisis are to be found in over-accumulation and also in contradictions of state power, or in what Marxists call the internal contradictions of the capitalist system. Moreover, because the system is now global, crisis in any one place tends to represent crisis for the system as a whole. The system cannot expand because the marginalisation of a significant portion of humanity from direct productive participation, the downward pressure on wages and popular consumption worldwide, and the polarisation of income, has reduced the ability of the world market to absorb world output. At the same time, given the particular configuration of social and class forces and the correlation of these forces worldwide, national states are hard-pressed to regulate transnational circuits of accumulation and offset the explosive contradictions built into the system. Is this crisis cyclical, structural, or systemic? Cyclical crises are recurrent to capitalism about once every 10 years and involve recessions that act as self-correcting mechanisms without any major restructuring of the system. The recessions of the early 1980s, the early 1990s, and of 2001 were cyclical crises. In contrast, the 2008 crisis signaled the slide into a structural crisis. Structural crises reflect deeper contra- dictions that can only be resolved by a major restructuring of the system. The structural crisis of the 1970s was resolved through capitalist globalisation. Prior to that, the structural crisis of the 1930s was resolved through the creation of a new model of redistributive capitalism, and prior to that the struc- tural crisis of the 1870s resulted in the development of corpo- rate capitalism. A systemic crisis involves the replacement of a system by an entirely new system or by an outright collapse. A structural crisis opens up the possibility for a systemic crisis. But if it actually snowballs into a systemic crisis – in this case, if it gives way either to capitalism being superseded or to a breakdown of global civilisation – is not predetermined and depends entirely on the response of social and political forces to the crisis and on historical contingencies that are not easy to forecast. This is an historic moment of extreme uncertainty, in which collective responses from distinct social and class forces to the crisis are in great flux. Hence my concept of global crisis is broader than financial. There are multiple and mutually constitutive dimensions – economic, social, political, cultural, ideological and ecological, not to mention the existential crisis of our consciousness, values and very being. There is a crisis of social polarisation, that is, of social reproduction. The system cannot meet the needs or assure the survival of millions of people, perhaps a majority of humanity. There are crises of state legitimacy and political authority, or of hegemony and domination. National states face spiraling crises of legitimacy as they fail to meet the social grievances of local working and popular classes experiencing downward mobility, unemployment, heightened insecurity and greater hardships. The legitimacy of the system has increasingly been called into question by millions, perhaps even billions, of people around the world, and is facing expanded counter-hegemonic challenges. Global elites have been unable counter this erosion of the system’s authority in the face of worldwide pressures for a global moral economy. And a canopy that envelops all these dimensions is a crisis of sustainability rooted in an ecological holocaust that has already begun, expressed in climate change and the impending collapse of centralised agricultural systems in several regions of the world, among other indicators. By a crisis of humanity I mean a crisis that is approaching systemic proportions, threatening the ability of billions of people to survive, and raising the specter of a collapse of world civilisation and degeneration into a new “Dark Ages.”2 This crisis of humanity shares a number of aspects with earlier structural crises but there are also several features unique to the present: 1. The system is fast reaching the ecological limits of its reproduction. Global capitalism now couples human and natural history in such a way as to threaten to bring about what would be the sixth mass extinction in the known history of life on earth.3 This mass extinction would be caused not by a natural catastrophe such as a meteor impact or by evolutionary changes such as the end of an ice age but by purposive human activity. According to leading environmental scientists there are nine “planetary boundaries” crucial to maintaining an earth system environment in which humans can exist, four of which are experiencing at this time the onset of irreversible environmental degradation and three of which (climate change, the nitrogen cycle, and biodiversity loss) are at “tipping points,” meaning that these processes have already crossed their planetary boundaries. 2. The magnitude of the means of violence and social control is unprecedented, as is the concentration of the means of global communication and symbolic production and circulation in the hands of a very few powerful groups. Computerised wars, drones, bunker-buster bombs, star wars, and so forth, have changed the face of warfare. Warfare has become normalised and sanitised for those not directly at the receiving end of armed aggression. At the same time we have arrived at the panoptical surveillance society and the age of thought control by those who control global flows of communication, images and symbolic production. The world of Edward Snowden is the world of George Orwell; 1984 has arrived; 3. Capitalism is reaching apparent limits to its extensive expansion. There are no longer any new territories of significance that can be integrated into world capitalism, de-ruralisation is now well advanced, and the commodification of the countryside and of pre- and non-capitalist spaces has intensified, that is, converted in hot-house fashion into spaces of capital, so that intensive expansion is reaching depths never before seen. Capitalism must continually expand or collapse. How or where will it now expand? 4. There is the rise of a vast surplus population inhabiting a “planet of slums,”4 alienated from the productive economy, thrown into the margins, and subject to sophisticated systems of social control and to destruction - to a mortal cycle of dispossession-exploitation-exclusion. This includes prison-industrial and immigrant-detention complexes, omnipresent policing, militarised gentrification, and so on; 5. There is a disjuncture between a globalising economy and a nation-state based system of political authority. Transnational state apparatuses are incipient and have not been able to play the role of what social scientists refer to as a “hegemon,” or a leading nation-state that has enough power and authority to organise and stabilise the system. The spread of weapons of mass destruction and the unprecedented militarisation of social life and conflict across the globe makes it hard to imagine that the system can come under any stable political authority that assures its reproduction. Global Police State How have social and political forces worldwide responded to crisis? The crisis has resulted in a rapid political polarisation in global society. Both right and left-wing forces are ascendant. Three responses seem to be in dispute. One is what we could call “reformism from above.” This elite reformism is aimed at stabilising the system, at saving the system from itself and from more radical re- sponses from below. Nonetheless, in the years following the 2008 collapse of the global financial system it seems these reformers are unable (or unwilling) to prevail over the power of transnational financial capital. A second response is popular, grassroots and leftist resistance from below. As social and political conflict escalates around the world there appears to be a mounting global revolt. While such resistance appears insurgent in the wake of 2008 it is spread very unevenly across countries and regions and facing many problems and challenges. Yet another response is that I term 21st century fascism.5 The ultra-right is an insurgent force in many countries. In broad strokes, this project seeks to fuse reactionary political power with transnational capital and to organise a mass base among historically privileged sectors of the global working class – such as white workers in the North and middle layers in the South – that are now experiencing heightened insecurity and the specter of downward mobility. It involves militarism, extreme masculinisation, homophobia, racism and racist mobilisations, including the search for scapegoats, such as immigrant workers and, in the West, Muslims. Twenty-first century fascism evokes mystifying ideologies, often involving race/culture supremacy and xenophobia, embracing an idealised and mythical past. Neo-fascist culture normalises and glamorises warfare and social violence, indeed, generates a fascination with domination that is portrayed even as heroic.

determinism. For example, even if it were ordained that all technologies that can be developed will be developed, it can still matter when they are developed. The order in which they arrive can make an important difference – ideally, protective technologies should come before the destructive technologies against which they protect; or, if that is not possible, then it is desirable that the gap be minimized so that other countermeasures (or luck) may tide us over until robust protection become available. The timing of an invention also influences what sociopolitical context the technology is born into. For example, if we believe that there is a secular trend toward civilization becoming more capable of handling black balls, then we may want to delay the most risky technological developments, or at least abstain from accelerating them. Even if we suppose that civilizational devastation is unavoidable, many would prefer it to take place further into the future, at a time when maybe they and their loved ones are no longer alive anyway.32 Differential technological development doesn’t really make sense in the original urn-of-creativity model, where the color of each ball comes as a complete surprise. If we want to use the urn model in this context, we must modify it. We could stipulate, for example, that the balls have different textures and that there is a correlation between texture and color, so that we get clues about the color of a ball before we extract it. Another way to make the metaphor more realistic is to imagine that there are strings or elastic bands between some of the balls, so that when we pull on one of them we drag along several others to which it is linked. Presumably the urn is highly tubular, since certain technologies must emerge before others can be reached (we are not likely to find a society that uses jet planes and flint axes). The metaphor would also become more realistic if we imagine that there is not just one hand daintily exploring the urn: instead, picture a throng of scuffling prospectors reaching in their arms in hopes of gold and glory, and citations. Correctly implementing differential technological development is clearly a difficult strategic task (Cf. Collingridge, 1980). Nevertheless, for an actor who cares altruistically about long-term outcomes and who is involved in some inventive enterprise (e.g. as a researcher, funder, entrepreneur, regulator, or legislator) it is worth making the attempt. Some implications, at any rate, seem fairly obvious: for instance, don’t work on laser isotope separation, don’t work on bioweapons, and don’t develop forms of geoengineering that would empower random individuals to unilaterally make drastic alterations to the Earth’s climate. Think twice before accelerating enabling technologies – such as DNA synthesis machines – that would directly facilitate such ominous developments.33 But boost technologies that are predominantly protective; for instance, ones that enable more efficient monitoring of disease outbreaks or that make it easier to detect covert WMD programs. Even if it is the case that all possible ‘bad’ technologies are bound to be developed eventually, it can still be helpful to buy a little time.34 However, differential technological development does not on its own offer a solution for vulnerabilities that persist over long periods – ones where adequately protective technologies are much harder to develop than their destructive counterparts, or where destruction has the advantage even at technological maturity.35 Preference modification Another theoretically possible way of achieving civilizational stabilization would be to change the fact that there exists a large population of actors representing a wide and recognizably human distribution of motives. We reserve for later discussion of interventions that would reduce the effective number of independent actors by increasing various forms of coordination. Here we consider the possibility of modifying the distribution of preferences (within a more or less constant population of actors). The degree to which this approach holds promise depends on which type of vulnerability we have in mind. In the case of a Type-1 vulnerability, preference modification does not look promising, at least in the absence of extremely effective means for doing so. Consider that some Type-1 vulnerabilities would result in civilizational devastation if there is even a single empowered person anywhere in the world who is motivated to pursue the destructive outcome. With that kind of vulnerability, reducing the number of people in the apocalyptic residual would do nothing to forestall devastation unless the number could be reduced all the way to zero, which may be completely infeasible. It is true that there are other possible Type-1 vulnerabilities that would require a somewhat larger apocalyptic residual in order for civilizational devastation to occur: for example, in a scenario like ‘easy nukes’, maybe there would have to be somebody from the apocalyptic residual in each of several hundred cities. But this is still a very low bar. It is difficult to imagine an intervention – short of radically re-engineering human nature on a fully global scale – that would sufficiently deplete the apocalyptic residual to entirely eliminate or even greatly reduce the threat of Type-1 vulnerabilities. Note that an intervention that halves the size of the apocalyptic residual would not (at least not through any firstorder effect) reduce the expected risk from Type-1 vulnerabilities by anywhere near as much. A reduction of 5 per cent or 10 per cent of Type-1 risk from halving the apocalyptic residual would be more plausible. The reason is that there is wide uncertainty about how destructive some new blackball technology would be, and we should arguably use a fairly uniform prior in log space (over several orders of magnitude) over the size of apocalyptic residual that would be required in order for civilizational devastation to occur conditional on a Type-1 vulnerability arising. In other words, conditional on some new technology being developed that makes it easy for an average individual to kill at least one million people, it may be (roughly) as likely that the technology would enable the average individual to kill one million people, ten million people, a hundred million people, a billion people, or every human alive. These considerations notwithstanding, preference modification could be helpful in scenarios in which the set of empowered actors is initially limited to some small definable subpopulation. Some black-ball technologies, when they first emerge from the urn, might be difficult to use and require specialized equipment. There could be a period of several years before such a technology has been perfected to the point where an average individual could master it. During this early period, the set of empowered actors could be quite limited; for example, it might consist exclusively of individuals with bioscience expertise working in a particular type of lab. Closer screening of applicants to positions in such labs could then make a meaningful dent in the risk that a destructive individual gains access to the biotech black ball within the first few years of its emergence.36 And that reprieve may offer an opportunity to introduce other countermeasures to provide more lasting stabilization, in anticipation of the time when the technology gets easy enough to use that it diffuses to a wider population. For Type-2a vulnerabilities, the set of empowered actors is much smaller. Typically what we are dealing with here are states, perhaps alongside a few especially powerful nonstate actors. In some Type-2a scenarios, the set might consist exclusively of two superpowers, or a handful of states with special capabilities (as is currently the case with nuclear weapons). It could thus be very helpful if the preferences of even a few powerful states were shifted in a more peaceloving direction. The ‘safe first strike’ scenario would be a lot less alarming if the actors facing the security dilemma had attitudes towards one another similar to those prevailing between Finland and Sweden. For many plausible sets of incentives that could arise for powerful actors as a consequence of some technological breakthrough, the prospects for a non-devastational outcome would be significantly brightened if the actors in question had more irenic dispositions. Although this seems difficult to achieve, it is not as difficult as persuading almost all the members in the apocalyptic residual to alter their dispositions. Lastly, consider Type-2b. Recall that such a vulnerability entails that ‘by default’ a great many actors face incentives to take some damaging action, such that the combined effects add up to civilizational devastation. The incentives for using the black-ball technology must therefore be ones that have a grip on a substantial fraction of the world population – economic gain being perhaps being the prime example of such a near-universal motivation. So imagine some private action, available to almost every individual, which saves each person who takes it a fraction X of his or her annual income, while producing a negative externality such that if half the world’s population takes the action then civilization gets devastated. At X = 0, we can assume that few people would take the antisocial action. But the greater X is, the larger the fraction of the population that would succumb to temptation. Unfortunately, it is plausible that the value of X that would induce at least half of the population to take the action is small, perhaps less than 1 per cent.37 While it would be desirable to change the distribution of global preferences so as to make people more altruistic and raise the value of X, this seems difficult to achieve. (Consider the many strong forces already competing for hearts and minds – corporate advertisers, religious organizations, social movements, education systems, and so on.) Even a dramatic increase in the amount of altruism in the world – corresponding, let us say, to a doubling of X from 1 per cent to 2 per cent – would prevent calamity only in a relatively narrow band of scenarios, namely those in which the private benefit of using the destructive technology is in the 1–2 per cent range. Scenarios in which the private gain exceeds 2 per cent would still result in civilizational devastation. In sum, modifying the distribution of preferences within the set of actors that would be destructively empowered by a black-ball discovery could be a useful adjunct to other means of stabilization, but it can be difficult to implement and would at best offer only very partial protection (unless we assume extreme forms of worldwide re-engineering of human nature).38 Some specific countermeasures and their limitations Beside influencing the direction of scientific and technological progress, or altering destruction-related preferences, there are a variety of other possible countermeasures that could mitigate a civilizational vulnerability. For example, one could try to: • prevent the dangerous information from spreading; • restrict access to requisite materials, instruments, and infrastructure; • deter potential evildoers by increasing the chance of their getting caught; • be more cautious and do more risk assessment work; and • establish some kind of surveillance and enforcement mechanism that would make it possible to interdict attempts to carry out a destructive act It should be clear from our earlier discussion and examples that the first four of these are not general solutions. Preventing information from spreading could easily be infeasible. Even if it could be done, it would not prevent the dangerous information from being independently rediscovered. Censorship seems to be at best a stopgap measure.39 Restricting access to materials, instruments, and infrastructure is a great way to mitigate some kinds of (gray-ball) threats, but it is unavailing for other kinds of threats – such as ones in which the requisite ingredients are needed in too many places in the economy or are already ubiquitously available when the dangerous idea is discovered (such as glass, metal, and batteries in the ‘easy nukes’ scenario). Deterring potential evildoers makes good sense; but for sufficiently destructive technologies, the existence of an apocalyptic residual renders deterrence inadequate even if every perpetrator were certain to get caught. Exercising more caution and doing more risk assessment is also a weak and limited strategy. One actor unilaterally deciding to be more cautious may not help much with respect to a Type-2a vulnerability, and would do basically nothing for one of Type-2b or Type-1. In the case of a Type0 vulnerability, it could help if the pivotal actor were more cautious – though only if the first cautiously tiptoeing actor were not followed by an onrush of incautious actors getting access to the same risky technology (unless the world had somehow, in the interim, been stabilized by other means).40 And as for risk assessment, it could lower the risk only if it led to some other countermeasure being implemented.41 The last countermeasure in the list – surveillance – does point towards a more general solution. We will discuss it in the next section under the heading of ‘preventive policing’. But we can already note that on its own it is not sufficient. For example, consider a Type-2b vulnerability such as ‘worse global warming’. Even if surveillance made it possible for a state to perfectly enforce any environmental regulation it chooses to impose, there is still the problem of getting a sufficient plurality of states to agree to adopt the requisite regulation – something which could easily fail to happen. The limitations of surveillance are even more evident in the case of Type-2a vulnerability, such as ‘safe first strike’, where the problem is that states (or other powerful actors) are strongly incentivized to perform destructive acts. The ability of those states to perfectly control what goes on within their own borders does not solve this problem. What is needed to reliably solve problems that involve challenges of international coordination, is effective global governance. Governance gaps The limitations of technological relinquishment, preference modification, and various specific countermeasures as responses to a potential civilizational vulnerability should now be clear. To the extent, therefore, that we are concerned that VWH may be true, we must consider the remaining two possible ways of achieving stabilization: 1. Create the capacity for extremely effective preventive policing. Develop the intra-state governance capacity needed to prevent, with extremely high reliability, any individual or small group – including ones that cannot be deterred – from carrying out any action that is highly illegal; and 2. Create the capacity for strong global governance. Develop the inter-state governance capacity needed to reliably solve the most serious global commons problems and ensure robust cooperation between states (and other strong organizations) wherever vital security interests are at stake – even where there are very strong incentives to defect from agreements or refuse to sign on in the first place.

#### Capitalism causes existential black-ball tech threat.

Bostrom 19 [Nick Bostrom (philosopher at Oxford and founding director of the Future of Humanity Institute). The Vulnerable World Hypothesis”. Global Policy Volume 10. Issue 4. November 2019. Accessed 11/1/8/21. <https://www.nickbostrom.com/papers/vulnerable.pdf> //Recut Xu from EM]

Let us introduce the hypothesis that the urn of creativity contains at least one black ball. We can refer to this as the vulnerable world hypothesis (VWH). Intuitively, the hypothesis is that there is some level of technology at which civilization almost certainly gets destroyed unless quite extraordinary and historically unprecedented degrees of preventive policing and/or global governance are implemented. More precisely: VWH: If technological development continues then a set of capabilities will at some point be attained that make the devastation of civilization extremely likely, unless civilization sufficiently exits the semianarchic default condition. By the ‘semi-anarchic default condition’ I mean a world order characterized by three features12 : 1. Limited capacity for preventive policing. States do not have sufficiently reliable means of real-time surveillance and interception to make it virtually impossible for any individual or small group within their territory to carry out illegal actions – particularly actions that are very strongly disfavored by > 99 per cent of the population. 2. Limited capacity for global governance. There is no reliable mechanism for solving global coordination problems and protecting global commons – particularly in high-stakes situations where vital national security interests are involved. 3. Diverse motivations. There is a wide and recognizably human distribution of motives represented by a large population of actors (at both the individual and state level) – in particular, there are many actors motivated, to a substantial degree, by perceived self-interest (e.g. money, power, status, comfort and convenience) and there are some actors (‘the apocalyptic residual’) who would act in ways that destroy civilization even at high cost to themselves.3 The term ‘devastation of civilization’ in the above definition could be interpreted in various ways, yielding different versions of VWH. For example, one could define an existential-risk vulnerable world hypothesis (x-VWH), which would state that at some level of technology, by default, an existential catastrophe occurs, involving the extinction of Earth-originating intelligent life or the permanent blighting of our future potential for realizing value. However, here we will set the bar lower. A key concern in the present context is whether the consequences of civilization continuing in the current semi-anarchic default condition are catastrophic enough to outweigh reasonable objections to the drastic developments that would be required to exit this condition. If this is the criterion, then a threshold short of human extinction or existential catastrophe would appear sufficient. For instance, even those who are highly suspicious of government surveillance would presumably favour a large increase in such surveillance if it were truly necessary to prevent occasional region-wide destruction. Similarly, individuals who value living in a sovereign state may reasonably prefer to live under a world government given the assumption that the alternative would entail something as terrible as a nuclear holocaust. Therefore, we stipulate that the term ‘civilizational devastation’ in VWH refers (except where otherwise specified) to any destructive event that is at least as bad as the death of 15 per cent of the world population or a reduction of global GDP by > 50 per cent per cent lasting for more than a decade.13 It is not a primary purpose of this paper to argue that VWH is true. (I regard that as an open question, though it would seem to me unreasonable, given the available evidence, to be at all confident that VWH is false.) Instead, the chief contribution claimed here is that VWH, along with related concepts and explanations, is useful in helping us surface important considerations and possibilities regarding humanity’s macrostrategic situation. But those considerations and possibilities need to be further analyzed, and combined with other considerations that lie outside the scope of this paper, before they could deliver any definitive policy implications. A few more clarifications before we move on. This paper uses the word ‘technology’ in its broadest sense. Thus, in principle, we count not only machines and physical devices but also other kinds of instrumentally efficacious templates and procedures – including scientific ideas, institutional designs, organizational techniques, ideologies, concepts, and memes – as constituting potential technological black balls.14 We can speak of vulnerabilities opening and closing. In the ‘easy nukes’ scenario, the period of vulnerability begins when the easy way of producing nuclear explosions is discovered. It ends when some level of technology is attained that makes it reasonably affordable to stop nuclear explosions from causing unacceptable damage – or that again makes it infeasible to produce nuclear explosions (because of technological regress).15 If no protective technology is possible (as in, e.g., the case of nuclear weapons it may not be) and technological regress does not occur, then the world becomes permanently vulnerable. We can also speak of the world being stabilized (with respect to some vulnerability) if the semi-anarchic default condition is exited in such a way as to prevent the vulnerability from leading to an actual catastrophe. The ways in which the semi-anarchic default condition would have to be altered in order to achieve stabilization depend on the specifics of the vulnerability in question. In a later section, we will discuss possible means by which the world could be stabilized. For now, we simply note that VWH does not imply that civilization is doomed. Typology of vulnerabilities We can identify four types of civilizational vulnerability. Type-1 (‘easy nukes’) The first type is one where, as in the ‘easy nukes’ scenario, it becomes too easy for individuals or small groups to cause mass destruction: Type-1 vulnerability: There is some technology which is so destructive and so easy to use that, given the semi-anarchic default condition, the actions of actors in the apocalyptic residual make civilizational devastation extremely likely. Note that in determining whether a scenario presents a Type-1 vulnerability, there is an inverse relationship between the ease with which it becomes possible to cause an incident and the destructiveness of incident. The greater the destructiveness of a single incident, the less easy it needs to be to cause such an incident in order for us to diagnose the presence of a Type-1 vulnerability. Thus, consider a ‘very easy nukes’ scenario, in which any halfwit can create an easily portable thermonuclear weapon at the kitchen sink over the course of an afternoon: this would definitely qualify as a civilizational vulnerability. Contrast this with a ‘moderately easy nukes’ scenario, in which it takes a five-person team of semi-skilled individuals toiling for an entire year to produce a single bulky few-kiloton device: that might not quite rise to the level of a civilizational vulnerability. It seems possible, in the ‘moderately easy nukes’ scenario, that the great majority of cities would escape destruction, although the threat posed by a well- resourced terrorist organization, such as Aum Shinrikyo anno 1995 or Al-Qaeda anno 2001, would increase substantially. However, consider yet another scenario, ‘moderately easy bio-doom’, in which again it requires a semi-skilled five-person team working for a year to put the black-ball technology into effect, except that this time it is a biological agent, a single point release of which is sufficient to kill billions. In ‘moderately easy bio-doom’, the threshold for a Type-1 vulnerability would be reached. If destroying civilisation required only that a single group succeed with a task at the moderately-easy level, civilization would probably be destroyed within a few years in the semi-anarchic default condition. Indeed, both Aum Shinrikyo and Al-Qaeda sought to obtain nuclear and biological weapons, and would likely have chosen to use them (see e.g. Danzig et al., 2011; Olson, 1999; Mowatt-Larssen and Allison, 2010). So a Type-1 vulnerability exists if it is either extremely easy to cause a moderate amount of harm or moderately easy to cause an extreme amount of harm.16 The reason why a black-ball technology that enables only moderate amounts of harm per incident could count as a Type-1 vulnerability is that – if the technology is sufficiently easy to use – a large number of such incidents would be almost certain to occur. Take the scenario where it is easy for an average individual to make a metropolis-busting H-bomb. This is not necessarily a scenario in which a single individual could devastate civilization. Building hundreds of bombs and transporting them to hundreds of cities without getting caught would still be a formidable endeavor even if making a single bomb were fairly easy. The ‘easy nukes’ scenario nevertheless presents a civilizational vulnerability because it is plausible that there would in fact be hundreds of individuals who would each destroy at least one city under those circumstances. That this is so almost follows from the law of large numbers combined with the plausible assumption that for any randomly selected person there is some small but appreciable chance that they would be motivated to trigger this kind of destruction – whether out of ideological hatred, nihilistic destructiveness, revenge for perceived injustices, as part of some extortion plot, or because of delusions or mental illness, or perhaps even just to see what would happen. Given the diversity of human character and circumstance, for any ever so imprudent, immoral, or self-defeating action, there is some residual fraction of humans who would choose to take that action. This is especially plausible if the action in question represents a culturally salient affordance – as it everywhere would after one such nuke attack had taken place. In other words, ‘easy nukes’ is an illustration of a vulnerable world because it looks like the apocalyptic residual has a large enough intersection with the set of empowered actors that one would expect a civilization-devastating amount of destruction to result. Type-2a (‘safe first strike’) A technology that ‘democratizes’ mass destruction is not the only kind of black ball that could be hoisted out of the urn. Another kind would be a technology that strongly incentivizes powerful actors to use their powers to cause mass destruction. Again we can turn to nuclear history for illustration. After the invention of the atomic bomb and a short-lived American nuclear monopoly, an arms race ensued between the US and the USSR. The rival superpowers amassed staggering arsenals, topping out at 70,000 nuclear warheads in 1986, more than enough to devastate civilization (Norris and Kristensen, 2010). While public awareness of the perils of the Cold War seems to have faded since its peaceful conclusion in 1991, the academic community – benefiting from the opening of formerly classified archives and the testimony of retired policy makers, officers, and analysts – has uncovered a disconcerting array of practices and incidents which seem to have repeatedly brought the world to the brink.17 Just how close we came remains a topic of dispute. Some scholars have argued that it was only thanks to a good deal of luck that nuclear holocaust was avoided.18 Whether surviving the Cold War required much luck or just a little, we can easily imagine a counterfactual in which the odds of avoiding a nuclear conflagration would be substantially worse. This holds even if we assume that nuclear weapons can be produced only by large technologically advanced states (thus distinguishing the case from the type1 vulnerability of ‘easy nukes’). The counterfactual could involve changes in the technological possibility frontier that would have made the arms race less stable. For example, it is widely believed among nuclear strategists that the development of a reasonably secure secondstrike capability by both superpowers by the mid-1960s created the conditions for ‘strategic stability’ (Colby and Gerson, 2013). Prior to this period, American war plans reflected a much greater inclination, in any crisis situation, to launch a preemptive nuclear strike against the Soviet Union’s nuclear arsenal. The introduction of nuclear submarinebased ICBMs was thought to be particularly helpful for ensuring second-strike capabilities (and thus ‘mutually assured destruction’) since it was widely believed to be practically impossible for an aggressor to eliminate the adversary’s boomer fleet in the initial attack.19 Other strategies for ensuring a second-strike capability could also be employed, but they had drawbacks. For example, one option, briefly used by the United States, was to have a contingent of long-range nuclear bombers on continuous airborne alert (Sagan, 1995). This program was very costly and increased the risk of accidental or unauthorized attacks. Another option was to build hardened land-based missile silos: in sufficient numbers, these could in principle provide the assurance of a second-strike capability to one side; however, such a large arsenal would then threaten to provide the capacity of a safe first strike against the other side, thus again destabilizing any crisis. Road-mobile ICBM launchers, which are harder to attack than silo-based missiles, eventually provided some stabilization when they were deployed by the Soviet Union in 1985, a few years before the end of Cold War (Brower, 1989). So consider a counterfactual in which a preemptive counterforce strike is more feasible. Imagine some technology that makes it easy to track ballistic missile submarines. We can also imagine that nuclear weapons were a bit more fragile, so that the radius within which a nuclear weapon would be destroyed by the detonation of another nuclear weapon was substantially larger than it actually is.20 Under those circumstances, it might have been impossible to ensure a second-strike capability. Suppose, further, that technology had been such as to make it very hard to detect missile launches, rendering a launch-on-warning strategy completely unworkable. The crisis instability of the Cold War would then have been greatly amplified. Whichever side struck first would survive relatively unscathed (or might at least have believed that it would, since the possibility of a nuclear winter was largely ignored by war planners at the time; Badash, 2001; Ellsberg, 2017).21 The less aggressive side would be utterly destroyed. In such a situation, mutual fear could easily trigger a dash to all-out war (Schelling, 1960). Other technological parameter changes could similarly increase the probability of attacks. In the real world, the main ‘attraction’ of a nuclear first strike is that it would alleviate the fear that one might otherwise oneself become the victim of such a strike; but we can imagine a counterfactual in which there are also benefits to nuclear aggression, beyond the removal of a negative. Suppose it were somehow possible to derive great economic gains from initiating a large-scale nuclear assault.22 It might be hard to see how this could be the case, yet one can imagine some automated manufacturing technology or energy technology making physical resources more valuable; or technology-enabled population growth could again make agricultural land a more vital resource (Drexler, 1986)). Some international relations scholars believe that the net economic benefits of conquest have declined substantially in the post-industrial era and that this decline has been a major contributor to peace.23 If powerful national economic motives were again added to other causes for war (such as concern for one’s own security, disputes over non-economic values, maintenance of national reputation, influence of particularly bellicose special interest groups, inter alia) then armed conflicts might become more common and large-scale nuclear war more likely. In these examples, the vulnerability arises not from destruction getting easier, but from the actions leading to destruction coming to be supported by stronger incentives. We shall call these Type-2 vulnerabilities. Specifically, a scenario like ‘safe first strike’, in which some enormously destructive action becomes incentivized, we shall refer to as Type-2a: Type-2a vulnerability: There is some level of technology at which powerful actors have the ability to produce civilization-devastating harms and, in the semi-anarchic default condition, face incentives to use that ability. We will see some more examples of Type-2a vulnerabilities below, where the ‘civilization-devastating harms’ take the form of risk externalities. Type-2b (‘worse global warming’) There is yet another way in which the world could be vulnerable; one that we can illustrate with a counterfactual related to climate change. In the real world, we observe a secular rise in global mean temperature, widely believed to be driven primarily by human-caused emissions of greenhouse gases such as carbon dioxide, methane, and nitrous oxide (Stocker et al., 2014).Projections vary, depending on the emissions scenario and modelling assumptions, but forecasts that imply an average temperature rise of between 3o C and 4.5o C in 2100 (compared to 2000), in the absence of any significant action to reduce emissions, are quite typical (See Stocker et al. (2014, table 12.2)). The effects of such warming – on sea levels, weather patterns, ecosystems, and agriculture – are usually expected to be net negative for human welfare (See Field et al. (2014, figure 10-1)). Greenhouse gases are emitted by wide range of activities, including in industry, transport, agriculture, and electricity production, and from all around the world, though especially from industrialized or industrializing countries. Efforts to curb emissions have so far failed to achieve much global-scale impact (Friedlingstein et al., 2014)). Now, we could imagine a situation in which the problem of global warming would be far more dire than it actually seems to be. For example, the transient climate sensitivity (a measure of the medium-term change in mean global surface temperature of the Earth that results from some kind of forcing, such as a doubling of atmospheric CO2) could have turned out to be much greater than it is (Shindell, 2014). If it had been several times larger than its actual value, we would have been in for a temperature rise of, say, 15o or 20o C instead of 3o – a prospect with far greater civilization-destroying potential than the actual expectation.24 We can also imagine other deviations from reality that would have made global warming a worse problem. Fossil fuels could have been even more abundant than they are, and available in more cheaply exploitable deposits, which would have encouraged greater consumption. At the same time, clean energy alternatives could have been more expensive and technologically challenging. Global warming could also have been a worse problem if there were stronger positive feedback loops and nonlinearities, such as an initial phase in which the atmosphere is gradually loaded up with greenhouse gases without much observable or detrimental effect, followed by a second phase in which temperatures shoot up abruptly. To get a truly civilizational threat from global warming, it may also be necessary to stipulate, counterfactually, that mitigation through geoengineering is infeasible. The vulnerability illustrated by such a ‘worse global warming’ scenario is different from that of a Type-2a scenario like ‘safe first strike’. In a Type-2a vulnerability, some actor has the ability to take some action – such as launching a nuclear first strike – that is destructive enough to devastate civilization. In the ‘worse global warming’ scenario, no such actor need exist. Instead, in what we will call a Type-2b vulnerability, there is a large number of individually insignificant actors who is each incentivized (under the semianarchic default condition) to take some action that contributes slightly to what cumulatively becomes a civilizationdevastating problem: Type-2b vulnerability: There is some level of technology at which, in the semi-anarchic default condition, a great many actors face incentives to take some slightly damaging action such that the combined effect of those actions is civilizational devastation. What Type-2a and Type-2b have in common is that, in both cases, the damage-capable actors face incentives that would encourage a wide range of normally motivated actors in their situation to pursue the course of action that leads to damage. Global warming would not be a problem if only some small fraction of those actors who can drive cars or chop down a few trees chose to do so; the problem arises only because many actors make these choices. And in order for many actors to make those choices, the choices must be supported by incentives that have wide appeal (such as money, status, and convenience). Similarly, if only one in a million actors who could launch a nuclear first strike would actually choose to do so, then it would not be so alarming if there are a handful of actors possessing that capability; but it does get worrisome if launching a nuclear strike is strongly supported by incentives that appeal to normally-motivated actors (such as the motive of preempting a strike by one’s adversary). This is in contrast to a Type-1 vulnerability, where the problem arises from the very widespread proliferation of destructive capability. Only an actor with quite unusual values would choose, at great cost and risk to himself, to blow up a city or unleash a doomsday pathogen; the trouble in that case is that if sufficiently many actors possess such a capability, then the subset of them who also have apocalyptic motives is not empty. Type-0 (‘surprising strangelets’) In 1942, it occurred to Edward Teller, one of the Manhattan scientists, that a nuclear explosion would create a temperature unprecedented in Earth’s history, producing conditions similar to those in the center of the sun, and that this could conceivably trigger a self-sustaining thermonuclear reaction in the surrounding air or water Rhodes, 1986). The importance of Teller’s concern was immediately recognized by Robert Oppenheimer, the head of the Los Alamos lab. Oppenheimer notified his superior and ordered further calculations to investigate the possibility. These calculations indicated that atmospheric ignition would not occur. This prediction was confirmed in 1945 by the Trinity test, which involved the detonation of the world’s first nuclear explosive.25 In 1954, the US carried out another nuclear test, the Castle Bravo test, which was planned as a secret experiment with an early lithium-based thermonuclear bomb design. Lithium, like uranium, has two important isotopes: lithium-6 and lithium-7. Ahead of the test, the nuclear scientists calculated the yield to be 6 megatons (with an uncertainty range of 4–8 megatons). They assumed that only the lithium-6 would contribute to the reaction, but they were wrong. The lithium-7 contributed more energy than the lithium-6, and the bomb detonated with a yield of 15 megaton – more than double of what they had calculated (and equivalent to about 1,000 Hiroshimas). The unexpectedly powerful blast destroyed much of the test equipment. Radioactive fallout poisoned the inhabitants of downwind islands and the crew of a Japanese fishing boat, causing an international incident. We may regard it at as lucky that it was the Castle Bravo calculation that was incorrect, and not the calculation of whether the Trinity test would ignite the atmosphere. Counterfactually, if the atmosphere had been susceptible to ignition by a nuclear detonation, and if this fact had been relatively easy to overlook – let us say as easy as it was to overlook the contribution of the lithium-7 in the Castle Bravo test – then the human story (and that of all terrestrial life) would have come to an end in 1945. We can call this scenario ‘Castle Bravissimo’. Whenever we pull a ball from the urn of invention, there could conceivably be a possibility of accidental devastation. Usually, this risk is negligible; but in some cases it could be significant, especially when the technology in question generates some kind of novel perturbation of nature or introduces historically unprecedented conditions. This suggests that we should add to our typology one more category, that of technology-fated accidental civilizational devastation: Type-0 vulnerability: There is some technology that carries a hidden risk such that the default outcome when it is discovered is inadvertent civilizational devastation.26 It is instructive to note, however, that ‘Castle Bravissimo’ is not a perfect illustration of a Type-0 vulnerability. Suppose that careful calculations had shown that there was a 1 per cent probability that a nuclear detonation would ignite the atmosphere and the oceans and thereby extinguish life on Earth. Suppose, further, that it had been known that to resolve the matter further and prove that the chance was zero (or alternatively, that the chance was one) would take another 10 years of meticulous study. It is unclear, under those circumstances, what the leaders of the Manhattan project would have decided. They would presumably have thought it greatly desirable that humanity hold off on developing nuclear weapons for at least another 10 years.27 On the other hand, they would have feared that Germany might have an advanced bomb project and that Hitler maybe would not pull the breaks because of a 1 per cent risk of destroying the world.28 They might have concluded that the risk of testing a nuclear bomb was worth taking in order to reduce the probability of Nazi Germany ending up with a nuclear monopoly. In this version of ‘Castle Bravissimo’, civilization gets blown up by accident: nobody sought to cause a destructive event. Yet the key actors were locked in a strategic situation that incentivized them to proceed despite the risk. In this respect, the scenario fits as a Type-2a vulnerability; only, the civilization-devastating harm it involves is probabilistic. When nuclear technology becomes possible, powerful actors face incentives, in the semi-anarchic default condition, to use that technology in ways that produce civilization-destroying harms (which here take the form of risk externalities).29 Accordingly, in order for us to diagnose a Type-0 vulnerability, we require that a stronger condition be met than merely that the key actors did not intend destruction. We stipulate that ‘inadvertent’ should here mean that the adverse outcome sprang from bad luck, not coordination failure. In a Type-0 vulnerability, the key actors would, even if they were adequately coordinated, decide to proceed with using the technology, in the belief that the benefits would outweigh costs – but they would be wrong, and the costs would be larger than expected, enough so as to cause civilizational devastation.30 Since ‘Castle Bravissimo’ only ambiguously satisfies this criterion (it being unclear in the original counterfactual to what extent the disaster would have resulted from coordination failure and to what extent from miscalculation/bad luck), it may be useful to introduce a cleaner example of a Type-0 vulnerability. Thus, consider a ‘surprising strangelets’ scenario in which some modern high-energy physics experiment turns out to initiate a self-catalyzing process in which ordinary matter gets converted into strange matter, with the result that our planet is destroyed. This scenario, and variations thereof in which accelerator experiments generate stable black holes or trigger the decay of a metastable vacuum state, have been analyzed in the literature (Jaffe et al., 2000; Tegmark and Bostrom, 2005). Such outcomes would indeed be very surprising, since analysis indicates that they have a completely negligible chance of occurring. Of course, with sufficiently bad luck, a negligiblechance event could occur. But alternatively (and far more likely in this case), the analysis could have a hidden flaw, like the Castle Bravo calculations did; in which case the chance might not be so negligible after all (Ord et al., 2010).31 Achieving stabilization The truth of VWH would be bad news. But it would not imply that civilization will be devastated. In principle at least, there are several responses that could stabilize the world even if vulnerability exists. Recall that we defined the hypothesis in terms of a black-ball technology making civilizational devastation extremely likely conditional on technological development continuing and the semi-anarchic default condition persisting. Thus we can theoretically consider the following possibilities for achieving stabilization: 1. Restrict technological development. 2. Ensure that there does not exist a large population of actors representing a wide and recognizably human distribution of motives. 3. Establish extremely effective preventive policing. 4. Establish effective global governance. We will discuss (3) and (4) in subsequent sections. Here we consider (1) and (2). We will argue they hold only limited promise as ways of protecting against potential civilizational vulnerabilities. Technological relinquishment In its general form, technological relinquishment looks exceedingly unpromising. Recall that we construed the word ‘technology’ broadly; so that completely stopping technological development would require something close to a cessation of inventive activity everywhere in the world. That is hardly realistic; and if it could be done, it would be extremely costly – to the point of constituting an existential catastrophe in its own right (Namely, ‘permanent stagnation’ (Bostrom, 2013)). That general relinquishment of scientific and technological research is a non-starter does not, however, imply that limited curtailments of inventive activities could not be a good idea. It can make sense to forego particularly perilous directions of advancement. For instance, recalling our ‘easy nukes’ scenario, it would be sensible to discourage research into laser isotope separation for uranium enrichment (Kemp, 2012). Any technology that makes it possible to produce weapons-grade fissile material using less energy or with a smaller industrial footprint would erode important barriers to proliferation. It is hard to see how a slight reduction in the price of nuclear energy would compensate. On the contrary, the world would probably be better off if it somehow became harder and more expensive to enrich uranium. What we would ideally want in this area is not technological progress but technological regress. While targeted regress might not be in the cards, we could aim to slow the rate of advancement towards risk-increasing technologies relative to the rate of advancement in protective technologies. This is the idea expressed by the principle of differential technological development. In its original formulation, the principle focuses on existential risk; but we can apply it more broadly to also encompass technologies with ‘merely’ devastational potential: Principle of Differential Technological Development. Retard the development of dangerous and harmful technologies, especially ones that raise the level of existential risk; and accelerate the development of beneficial technologies, especially those that reduce the existential risks posed by nature or by other technologies Bostrom, 2002). The principle of differential technological development is compatible with plausible forms of technological determinism. For example, even if it were ordained that all technologies that can be developed will be developed, it can still matter when they are developed. The order in which they arrive can make an important difference – ideally, protective technologies should come before the destructive technologies against which they protect; or, if that is not possible, then it is desirable that the gap be minimized so that other countermeasures (or luck) may tide us over until robust protection become available. The timing of an invention also influences what sociopolitical context the technology is born into. For example, if we believe that there is a secular trend toward civilization becoming more capable of handling black balls, then we may want to delay the most risky technological developments, or at least abstain from accelerating them. Even if we suppose that civilizational devastation is unavoidable, many would prefer it to take place further into the future, at a time when maybe they and their loved ones are no longer alive anyway.32 Differential technological development doesn’t really make sense in the original urn-of-creativity model, where the color of each ball comes as a complete surprise. If we want to use the urn model in this context, we must modify it. We could stipulate, for example, that the balls have different textures and that there is a correlation between texture and color, so that we get clues about the color of a ball before we extract it. Another way to make the metaphor more realistic is to imagine that there are strings or elastic bands between some of the balls, so that when we pull on one of them we drag along several others to which it is linked. Presumably the urn is highly tubular, since certain technologies must emerge before others can be reached (we are not likely to find a society that uses jet planes and flint axes). The metaphor would also become more realistic if we imagine that there is not just one hand daintily exploring the urn: instead, picture a throng of scuffling prospectors reaching in their arms in hopes of gold and glory, and citations. Correctly implementing differential technological development is clearly a difficult strategic task (Cf. Collingridge, 1980). Nevertheless, for an actor who cares altruistically about long-term outcomes and who is involved in some inventive enterprise (e.g. as a researcher, funder, entrepreneur, regulator, or legislator) it is worth making the attempt. Some implications, at any rate, seem fairly obvious: for instance, don’t work on laser isotope separation, don’t work on bioweapons, and don’t develop forms of geoengineering that would empower random individuals to unilaterally make drastic alterations to the Earth’s climate. Think twice before accelerating enabling technologies – such as DNA synthesis machines – that would directly facilitate such ominous developments.33 But boost technologies that are predominantly protective; for instance, ones that enable more efficient monitoring of disease outbreaks or that make it easier to detect covert WMD programs. Even if it is the case that all possible ‘bad’ technologies are bound to be developed eventually, it can still be helpful to buy a little time.34 However, differential technological development does not on its own offer a solution for vulnerabilities that persist over long periods – ones where adequately protective technologies are much harder to develop than their destructive counterparts, or where destruction has the advantage even at technological maturity.35 Preference modification Another theoretically possible way of achieving civilizational stabilization would be to change the fact that there exists a large population of actors representing a wide and recognizably human distribution of motives. We reserve for later discussion of interventions that would reduce the effective number of independent actors by increasing various forms of coordination. Here we consider the possibility of modifying the distribution of preferences (within a more or less constant population of actors). The degree to which this approach holds promise depends on which type of vulnerability we have in mind. In the case of a Type-1 vulnerability, preference modification does not look promising, at least in the absence of extremely effective means for doing so. Consider that some Type-1 vulnerabilities would result in civilizational devastation if there is even a single empowered person anywhere in the world who is motivated to pursue the destructive outcome. With that kind of vulnerability, reducing the number of people in the apocalyptic residual would do nothing to forestall devastation unless the number could be reduced all the way to zero, which may be completely infeasible. It is true that there are other possible Type-1 vulnerabilities that would require a somewhat larger apocalyptic residual in order for civilizational devastation to occur: for example, in a scenario like ‘easy nukes’, maybe there would have to be somebody from the apocalyptic residual in each of several hundred cities. But this is still a very low bar. It is difficult to imagine an intervention – short of radically re-engineering human nature on a fully global scale – that would sufficiently deplete the apocalyptic residual to entirely eliminate or even greatly reduce the threat of Type-1 vulnerabilities. Note that an intervention that halves the size of the apocalyptic residual would not (at least not through any firstorder effect) reduce the expected risk from Type-1 vulnerabilities by anywhere near as much. A reduction of 5 per cent or 10 per cent of Type-1 risk from halving the apocalyptic residual would be more plausible. The reason is that there is wide uncertainty about how destructive some new blackball technology would be, and we should arguably use a fairly uniform prior in log space (over several orders of magnitude) over the size of apocalyptic residual that would be required in order for civilizational devastation to occur conditional on a Type-1 vulnerability arising. In other words, conditional on some new technology being developed that makes it easy for an average individual to kill at least one million people, it may be (roughly) as likely that the technology would enable the average individual to kill one million people, ten million people, a hundred million people, a billion people, or every human alive. These considerations notwithstanding, preference modification could be helpful in scenarios in which the set of empowered actors is initially limited to some small definable subpopulation. Some black-ball technologies, when they first emerge from the urn, might be difficult to use and require specialized equipment. There could be a period of several years before such a technology has been perfected to the point where an average individual could master it. During this early period, the set of empowered actors could be quite limited; for example, it might consist exclusively of individuals with bioscience expertise working in a particular type of lab. Closer screening of applicants to positions in such labs could then make a meaningful dent in the risk that a destructive individual gains access to the biotech black ball within the first few years of its emergence.36 And that reprieve may offer an opportunity to introduce other countermeasures to provide more lasting stabilization, in anticipation of the time when the technology gets easy enough to use that it diffuses to a wider population. For Type-2a vulnerabilities, the set of empowered actors is much smaller. Typically what we are dealing with here are states, perhaps alongside a few especially powerful nonstate actors. In some Type-2a scenarios, the set might consist exclusively of two superpowers, or a handful of states with special capabilities (as is currently the case with nuclear weapons). It could thus be very helpful if the preferences of even a few powerful states were shifted in a more peaceloving direction. The ‘safe first strike’ scenario would be a lot less alarming if the actors facing the security dilemma had attitudes towards one another similar to those prevailing between Finland and Sweden. For many plausible sets of incentives that could arise for powerful actors as a consequence of some technological breakthrough, the prospects for a non-devastational outcome would be significantly brightened if the actors in question had more irenic dispositions. Although this seems difficult to achieve, it is not as difficult as persuading almost all the members in the apocalyptic residual to alter their dispositions. Lastly, consider Type-2b. Recall that such a vulnerability entails that ‘by default’ a great many actors face incentives to take some damaging action, such that the combined effects add up to civilizational devastation. The incentives for using the black-ball technology must therefore be ones that have a grip on a substantial fraction of the world population – economic gain being perhaps being the prime example of such a near-universal motivation. So imagine some private action, available to almost every individual, which saves each person who takes it a fraction X of his or her annual income, while producing a negative externality such that if half the world’s population takes the action then civilization gets devastated. At X = 0, we can assume that few people would take the antisocial action. But the greater X is, the larger the fraction of the population that would succumb to temptation. Unfortunately, it is plausible that the value of X that would induce at least half of the population to take the action is small, perhaps less than 1 per cent.37 While it would be desirable to change the distribution of global preferences so as to make people more altruistic and raise the value of X, this seems difficult to achieve. (Consider the many strong forces already competing for hearts and minds – corporate advertisers, religious organizations, social movements, education systems, and so on.) Even a dramatic increase in the amount of altruism in the world – corresponding, let us say, to a doubling of X from 1 per cent to 2 per cent – would prevent calamity only in a relatively narrow band of scenarios, namely those in which the private benefit of using the destructive technology is in the 1–2 per cent range. Scenarios in which the private gain exceeds 2 per cent would still result in civilizational devastation. In sum, modifying the distribution of preferences within the set of actors that would be destructively empowered by a black-ball discovery could be a useful adjunct to other means of stabilization, but it can be difficult to implement and would at best offer only very partial protection (unless we assume extreme forms of worldwide re-engineering of human nature).38 Some specific countermeasures and their limitations Beside influencing the direction of scientific and technological progress, or altering destruction-related preferences, there are a variety of other possible countermeasures that could mitigate a civilizational vulnerability. For example, one could try to: • prevent the dangerous information from spreading; • restrict access to requisite materials, instruments, and infrastructure; • deter potential evildoers by increasing the chance of their getting caught; • be more cautious and do more risk assessment work; and • establish some kind of surveillance and enforcement mechanism that would make it possible to interdict attempts to carry out a destructive act It should be clear from our earlier discussion and examples that the first four of these are not general solutions. Preventing information from spreading could easily be infeasible. Even if it could be done, it would not prevent the dangerous information from being independently rediscovered. Censorship seems to be at best a stopgap measure.39 Restricting access to materials, instruments, and infrastructure is a great way to mitigate some kinds of (gray-ball) threats, but it is unavailing for other kinds of threats – such as ones in which the requisite ingredients are needed in too many places in the economy or are already ubiquitously available when the dangerous idea is discovered (such as glass, metal, and batteries in the ‘easy nukes’ scenario). Deterring potential evildoers makes good sense; but for sufficiently destructive technologies, the existence of an apocalyptic residual renders deterrence inadequate even if every perpetrator were certain to get caught. Exercising more caution and doing more risk assessment is also a weak and limited strategy. One actor unilaterally deciding to be more cautious may not help much with respect to a Type-2a vulnerability, and would do basically nothing for one of Type-2b or Type-1. In the case of a Type0 vulnerability, it could help if the pivotal actor were more cautious – though only if the first cautiously tiptoeing actor were not followed by an onrush of incautious actors getting access to the same risky technology (unless the world had somehow, in the interim, been stabilized by other means).40 And as for risk assessment, it could lower the risk only if it led to some other countermeasure being implemented.41 The last countermeasure in the list – surveillance – does point towards a more general solution. We will discuss it in the next section under the heading of ‘preventive policing’. But we can already note that on its own it is not sufficient. For example, consider a Type-2b vulnerability such as ‘worse global warming’. Even if surveillance made it possible for a state to perfectly enforce any environmental regulation it chooses to impose, there is still the problem of getting a sufficient plurality of states to agree to adopt the requisite regulation – something which could easily fail to happen. The limitations of surveillance are even more evident in the case of Type-2a vulnerability, such as ‘safe first strike’, where the problem is that states (or other powerful actors) are strongly incentivized to perform destructive acts. The ability of those states to perfectly control what goes on within their own borders does not solve this problem. What is needed to reliably solve problems that involve challenges of international coordination, is effective global governance. Governance gaps The limitations of technological relinquishment, preference modification, and various specific countermeasures as responses to a potential civilizational vulnerability should now be clear. To the extent, therefore, that we are concerned that VWH may be true, we must consider the remaining two possible ways of achieving stabilization: 1. Create the capacity for extremely effective preventive policing. Develop the intra-state governance capacity needed to prevent, with extremely high reliability, any individual or small group – including ones that cannot be deterred – from carrying out any action that is highly illegal; and 2. Create the capacity for strong global governance. Develop the inter-state governance capacity needed to reliably solve the most serious global commons problems and ensure robust cooperation between states (and other strong organizations) wherever vital security interests are at stake – even where there are very strong incentives to defect from agreements or refuse to sign on in the first place.

### Part 2 is the Solvency

#### I affirm Resolved: The appropriation of outer space by private entities is unjust.

#### The aff identifies appropriation as unjust

Webster ND Definition of IS," Merriam Webster, <https://www.merriam-webster.com/dictionary/is> IS

is Definition of is (Entry 1 of 4) present tense third-person singular of BE dialectal present tense first-person and third-person singular of BE dialectal present tense plural of BE

#### Dialectical present tense means logical coherence which implies no implementation

Your Dictionary ND, , "Dialectical Meaning," No Publication, <https://www.yourdictionary.com/dialectical> Cho

The definition of dialectical is a discussion that includes logical reasoning and dialogue, or something having the sounds, vocabulary and grammar of a specific way of speaking. An example of something dialectical is a Lincoln Douglass style of debate, where both parties argue a point in a logical order. Of, or pertaining to dialectic; logically reasoned through the exchange of opposing ideas.

#### “BE” is a linking verb, not an action verb so implementation is incoherent

Grammar Monster ND "Linking Verbs," Grammar Monster, <https://www.grammar-monster.com/glossary/linking_verbs.htm> CHO

What Are Linking Verbs? (with Examples) A linking verb is used to re-identify or to describe its subject. A linking verb is called a linking verb because it links the subject to a subject complement (see graphic below). Infographic Explaining Linking Verb A linking verb tells us what the subject is, not what the subject is doing. Easy Examples of Linking Verbs In each example, the linking verb is highlighted and the subject is bold. Alan is a vampire. (Here, the subject is re-identified as a vampire.) Alan is thirsty. (Here, the subject is described as thirsty.)

A picture containing text, sign

Description automatically generated



#### Private entities prevents space exploration and culminate in extinction– only central planning can solve development and create an ethical altenrative.

Phillips 12 [Leigh Phillips is a science journalist with Nature and formerly a Brussels-based reporter for the Guardian and deputy editor of the EUobserver."Put Whitey Back on the Moon," Jacobin, <https://web.archive.org/web/20120926202524/http://jacobinmag.com:80/2012/09/put-whitey-back-on-the-moon>] nw

Of course, space exploration is expensive, risky and it is difficult to say at the outset what specific benefits it will deliver. All of which makes it very difficult, if not impossible, for the market to enter into this area. Apart from a handful of billionaire dilettantes, space exploration can only be done by the public sector. Virgin Galactic space tourism and out-sourcing cargo payload traffic to SpaceX are not the same as a serious, properly funded search for life on Enceladus, Europa, Mars, Titan and Io – the five best bets for extraterrestrial life in the solar system. The West only got as far as we did as the result of a push from the Soviet Union, which obviously was a monstrous system, but which did have a clear understanding of why space exploration is vital. Once Thatcherite-Reaganite neoliberalism took hold in the eighties and as soon as the competition dropped out in 1991, America lost most of its interest. And yet however expensive it is, what we’re spending at the moment is a pittance compared to what we spend on the military (or, one might add, on bank bailouts). According to astrophysicist Neil de Grasse Tyson, the annual US military budget is equivalent to Nasa’s entire 50-year running budget. “I think if you double [the budget], to a penny on the dollar, that’s enough to take us in bold visions in a shorter time scale to Mars, visit asteroids, to study the status of all the planets.”. There was some excitement last week when NASA announced another Mars mission to launch in 2016 as part of its Discovery Program, this time to listen for “marsquakes” and determine whether Mars has a solid or liquid core and why its crust is not composed of tectonic plates as Earth’s crust is. But the Discovery Program, established in 1992, aims to provide in the era of budget restraint a series of lower-cost planetary missions. In the words of then NASA chief Daniel Goldin: “faster, better, cheaper.” And it was not widely reported that the Marsquake mission (InSight is its name), was the winner out of a trio of finalist projects that included a mission to Saturnian moon Titan, for the first nautical exploration of an extra-terrestrial sea, floating on its hydrocarbon lakes. The cost? Just $425 million. But why can’t we have both? And with the funding that’s needed, not capped at an arbitrary sum? As wiseacre astronomer friend of mine told me, they have a joke: “Faster, better, cheaper: pick two.” Of course, if there were a limited pie of public resources, then a prioritization of other areas would be legitimate – Gil Scott Heron would be right. At the moment, there are other areas in more dire need. But money can be found. The UK’s Tax Justice Network in July published research showing that revenues lost to public coffers by the super-rich hiding these sums in tax havens amounted to $21 trillion as of 2010 – as much as the US and Japanese economies combined, and the figure could be as high as $32 trillion. There is more than enough money out there to have decent social services – and new ones, guaranteed incomes, well-funded pensions, a transformation to a low-carbon (or even carbon-negative) economy, and investment in space exploration. It’s a false choice to say: either space or everything else. The choice is actually between the current crop of political ideologies clustered around the neoliberal center, and something genuinely transformative on a global scale. But we should admit that space is indeed vastly expensive and requires the kind of state-led economy coordination that the near-sighted and risk-averse market will never be able to deliver. The Apollo programme cost $109 billion in 2010 dollars, $18 billion per each of its six landings. Contrary to what we are commonly told, market actors are lumbering elephants of conservatism. In almost every major new society-transforming technological development, it is the public, not the private sector that has done all the heavy lifting in terms of investment and shepherding them through to commercialization. Computers, the internet, biotech, nanotech, telecoms, electric power infrastructure, containerization – all would not be possible without the resolute role of the public sector. As Mariana Mazzucato, an economist specialising in innovation policy, asks in a recent pamphlet for Demos, a UK think-tank: “How many people know that the algorithm that led to Google’s success was funded by a public-sector National Science Foundation grant?” A commitment to any full-blooded exploration and colonization of the solar system will not be achievable until we supersede the current primitive economic system that isn’t only unjust, but also ~~retards~~ [prevents] exploration and technological development. Capitalism isn’t just killing the planet. Capitalism is keeping us stuck on the planet.

### Part 3 is the Method

#### We affirm the normative statement but our analysis isn’t separate from the broader framework – justifications are a prior question to concrete analysis because they answer when, why and how violence and injustice operate

Our scenario analysis of the resolution develops the political grammar for revolution – before we can discuss how to get there, we first must theorize what exact future we are fighting for

**Mass base cultivation must start through utopic communist demands like the aff that prophesize the end of Capitalism.**

**Tonstad 16** (Professor Tonstad is a constructive theologian working at the intersection of systematic theology with feminist and queer theory. Her first book, God and Difference: The Trinity, Sexuality, and the Transformation of Finitude, was published by Routledge in 2016 and was named both as a best new book in ethics and a best new book in theology in Christian Century in the spring of 2017. “Debt Time is Straight Time” political theology, Vol. 17 No. 5, September 2016, 434–448, Edited for ableist language – “visible” changed to “recognizable” )

If debt time, as I have argued, is straight time, can other temporal modes of production and affiliation be imagined? If debt time depends on promises made in the past to subjugate the present and future, might other promising pasts (made available through the non-limitative, intergenerational relations that “homosexual production” sometimes promotes) redirect us toward other futures — futures located in queer time? Dreaming and day-dreaming allow for Kathi Weeks’s “utopian demand” that can teach us what a “different world” in which our dreams would come to life would look like.45 To reeducate our temporal desires, we need to “affirm what we are and will it, because it is also the constitutive basis from which we can struggle to become otherwise.”46 This affirmation is no mere acceptance of the past as it is enforced on us by the moral couplings effort-reward or debt-obligation. Rather, it is “an active intervention into our ways of inhabiting the past.” The utopic demand affirms a future in which the demand would no longer be utopic, while also estranging us from the ethos that there is no alternative.47Guy Hocquenghem writes, “Homosexual production takes place according to a mode of non-limitative horizontal relations, heterosexual reproduction according to one of hierarchical succession … another possible social relation … is not vertical but horizontal.”48 Horizontal temporal relations can join with new spatial orders to constitute a we. Franco Berardi notes that one of the reasons workers’ struggles have tended to disappear historically (as exceptions rather than lasting coalitions) is that “for struggles to form a cycle there must be a spatial proximity of laboring bodies and an existential temporal continuity. Without this proximity and this continuity, we lack the conditions for cellularized bodies to become a community.”49 Spatial proximity is not enough by itself — antiblackness in the United States is but one example proving the point — but it is essential to the formation of coalitions and new forms of solidarity. Without side-by-side relationships, spatial and symbolic, and without creating and becoming a we, we can neither understand “our” time aright to diagnose it, nor shift the future into a direction other than the one marked out by the insistence that there is no alternative. With such relationships, the door is open for possibilities for redirecting the trajectory of debt time that do not require “distance from dominant culture,” but instead can take their own “imbrication with contemporary socioeconomic forces”50 as a point of departure. The first step is to name the powers and in so naming call them up and make them visible [recognizeable]— materialization of the demons that ride and haunt us, seeking to destroy us. The next step is to reorder our temporal and spatial relations to each other to create a we that does not yet exist.The promise of queer prophetic performance Sleeping and waking cross each other: for we must wake from our dreams of dust and ashes in order to read the signs of the times, and we must sleep so that we can learn to dream new dreams. Between the space of sleep and waking, we encounter the memory of other times, a memory that may become grounds for a future that is no future. Naming the signs of the times (knowing the time in order to escape its grasp, refusing the future in order to redirect it) is a prophetic practice. Althaus-Reid says, “[I]f God is to be found in human relationships of economic and loving orders, it is obvious that the right not to be straight in a capitalist society and church has the goal of liberating God.”51 And who can set God free? We need a prophetic52 bodily reordering in which the untimely one will arrive and tell us, or better show us, the series of negations, intentional relations, and world-making activities that are our best hope for living love in a time of capital. These hopes weigh less than the Spirit of Gravity does on our shoulders (that always-already that the history of Christian capitalism imposes on us); with them we may hope for an easier yoke that would allow us to replenish our relations to ourselves and others. Prophets dream for us and against us; they sound the alarm and they fall into trances in which revelations are given to them. Prophets use speech, performance, visions, dreams, and bodies to shift the relations between structures of authority and embedded hierarchicalizations. Those manipulations, those reorderings of apparently fixed elements of the world, reproduce but can also reconfigure visions of orders of power.53 Most importantly, prophets contend with other prophets in inexplicable bodied acts,54 and prophets contend with the prophets of other gods.55 Prophetic contestation breaks open the “monopoly of actuality” that insists “there is no alternative.” “Blow the trumpet … sound the alarm!” “Your sons and daughters will prophesy, your old men will dream dreams, your young men will see visions. Even on my servants, both men and women, I will pour out my spirit in those days.”56 The passage from Joel points to the transgenerational and transgendered aspects of prophecy, and to the importance of dreams. Late capitalism denies us dreams, and late capitalism monetizes even our dreams. But prophets dream the dreams that the rest of us are denied. Prophecies “have been a means by which the “poor” have externalized their desires, given legitimacy to their plans, and have been spurred to action.” For this reason, prophecy had to be “replaced with the calculation of probabilities” — a calculation that depends on the postulate that “the future will be like the past.”57 We are seeking a future that is not like the past. Prophecy opens the possibility of the impossible beyond calculation and prediction. Prophecy can connect the partially open future with the overdetermined present to suggest strategies for redirection and recreation. Kirk Fuoss argues that performance always involves contestation; if he is right, the same would apply to prophetic performances.58 Prophetic performances may contribute to the development of what Valerie Rohy understands as queer non-causality: a temporality “whose beginnings are found in the future.”59 Rohy describes the way becoming gay may involve a circular causality that escapes linear historical determination. In the case of Oscar Wilde, for instance, “Wilde’s homosexuality both causes the gay male identity of the future and is caused by it.”60 Such alternative causalities may break the effort-reward, promise-fault couplings of determinate historical time — of debt time. If we become what is not yet possible, our becoming escapes the past’s determination without negating it. Queer performances that embody impossible futures may have the capacity to vivify and illuminate extant alternative imaginaries while challenging the “monopoly of actuality” exercised by debt time, especially if these queer prophetic performances distinguish themselves from capital not by their freedom from it61 but by practicing in relation to it. Performance can reeducate our imaginations (our dreams) in ways that do not pretend — as attenuated or homonormative gay culture sometimes does — that no other economic order is possible. We need to relearn the connections between sexuality and the economic order that lesbian feminists and black feminists recognized from the very beginning.62 We must enter desire’s school for reeducation so we may learn to name the present for the sake of a redirected future. In order to change our futures (to make them no future for the time of financialized capitalism and hetero-same reproduction), we need — as I have argued — spatial and symbolic side-by-side relations, we need to learn the nature of our time (and times), and we need to create the worlds that we need to learn to want through institution-building and the generation of publics.

Transitions wars and revolution fails do not link – we agree a revolution would fail now but we think it should happen in the future and scenario analysis in debate is key to plan what a successful revolution in the future would look like.

#### Debate is a valuable pedagogical space for material analysis and scientific planning – our form of study uses historical synthesis to avoid error replication and catalyze a mass base transition.

Williams 18 [Carine, 7/30/18, “Why Black People Need Maoism in 2018”, *The Hampton Institute*, <http://www.hamptoninstitution.org/why-black-people-need-maoism.html#.XWwv7ZNKh0s> // KZaidi]

When they hear Maoism, many people think of China, Peru, and the Philippines. They picture peasants "surrounding the cities from the countryside." This is, of course, understandable, but a mistake. Maoism is not simply "everything that Mao did," or "everything that happened in China between 1949 and now." I have spent a great deal of my time writing working to dispel these sorts of myths, some peddled in an unprincipled fashion by anti-Maoists. Maoism is a living, breathing science. By science we mean something with universal principles that can be taken and applied by all who have a material interest in making revolution. In the United States, this is Black people, or the New Afrikan nation. It was not by accident that the original Black Panther Party (BPP) developed close relations with the revolutionary leadership of the People's Republic of China. Huey didn't go to China to play; he went to study and learn things that could be applied back home. Of course, he eventually degenerated in political line and practice, taking a right opportunist course along with Bobby Seale (always a centrist) and Elaine Brown (who guided the party, in his absence, into a mainstream political force that led into the arms of the Democratic Party). This opportunism in the highest expression of revolutionary sentiment, practice, and force in this country to date needs to be studied and ruthlessly criticized, yet we should be careful. We must place things in their historical context and ensure that we are able to divide one into two, meaning see the beneficial as well as the negative aspects of a thing but also realize that one aspect must be primary. The BPP was destroyed by a combination of factors: lack of a really scientific method of analysis and cohesive program of political education, failure to promote and apply the Marxist-Leninist principle of Democratic Centralism (debate inside the party, formation of a political line through this debate, and the upholding of this decision by all party members and organs), and a culture of liberalism that ended with comrades fighting comrades, thus opening the door for external factors (the FBI and other LE agencies) to play havoc and get cadre railroaded into prison and killed. We must study and learn all of these lessons, because when we develop another organization with the prestige, mass base, and power that the Panthers had, and we will, they will come for us all again. So, why do we need Maoism? Because we are against the most brutal, bloody, and vicious empire known to humankind. This country is looting and enslaving our class siblings all over the world. To overturn this order of things, to smash it and rebuild it in the interests of the revolutionary proletariat of the entire world, we must apply the synthesis of 200 years of systematic, organized class struggle, which is Marxism-Leninism-Maoism: the continuity of the revolutionary project that was Marxism-Leninism, with a rupture from the dogmatism and revisionism. Maoists do not uphold "Actually Existing Socialism" because a scientific analysis rooted in the principles laid down by the revolutionary movements and projects that gave us Marx, Engels, Lenin, Stalin, and Mao would demonstrate that stealing food from Filipino fisherfolk, like the People's Republic of China (PRC) has been doing, is 100% non-Marxist. This is in disagreement with many Marxist-Leninist organizations today, which uphold these things and other imperialist depredations carried out under the faded red banner of China. The Maoist argument is that Marxist-Leninist terrain has been spent, and the 21st century must learn from Maoism. "You haven't seized state power yet!" others cry. Indeed, and there has never been a truly Maoist party that has initiated armed struggle in the imperialist metro poles. This doesn't mean that Maoist principles cannot be applied to these countries, this means that we must be ever more creative in our application and ever more disciplined in our party-building efforts. Party building in the USA requires the careful and thorough cultivation of a mass base. Tens of thousands, even hundreds of thousands, of people must depend on and follow this party and participate in mass organizations before it can even begin to call itself a vanguard. This is what many who came out of the New Communist Movement of the mid-late 1970s failed to realize. The days of endless squabbling sects that fight over "mass bases" of a handful of other activists must be put to an end, and we must have a truly mass perspective. There is optimism in the spread of For the People (FTP) organizations and the development of the Organizing Committee for a Maoist Communist Party (MCP-OC) which has a more mass orientation and places primacy on the development of a class analysis and political line in the USA that is based in painstaking investigation and rooted in the aspirations and struggles of the most oppressed, along with a record of seeking to develop international solidarity and prison work. This, I believe, is the best hope for New Afrikan Maoists in the United States and I wholeheartedly encourage Black comrades to develop FTP-type organizations in their own communities under OC guidance. Even if this isn't done, at the very least studies in Maoism, studies in Maoist revolutions, and studies in Maoist theory are beneficial. After and during these studies, think about how it can be applied on your block and in your community. Learn about and be like Fred Hampton. Time is up for spinning our wheels; we must get together, unite on a principled and unshakeable basis, and mount a formidable resistance against decades and centuries-old oppression based in capitalism and white supremacy. I also encourage support and donation to the Hampton Institute as an invaluable resource in promoting revolutionary ideology and practice in the finest Marxist tradition.

#### The aff forwards a model of debate where iterative ballots over a season help us determine what a future communist world would look like – the ROB is to establish the conditions that makes revolution possible

Southall 10 (Nicholas Southall, doctoral student, University of Wollongong. “A Multitude of Possibilities: The Strategic Vision of Antonio Negri and Michael Hardt,” School of History and Politics and Sociology, 2010, <http://ro.uow.edu.au/cgi/viewcontent.cgi?article=4274&context=theses> )

Communism will remain associated with many of the horrors of the twentieth century. Yet the term is still used and understood as a name for the continuing proletarian revolution. A 'communist revival' in the English speaking academy has been indicated by the manifesto of students who occupied the University of California, Santa Cruz last year (Communique from an Absent Future: 2009) and the thousand participants in 2009 who paid to attend the 'Idea of Communism' conference at the University of London. My use of the word 'communism' is influenced and inspired by such actions as well as by Hardt and Negri's commitment to struggle over the meaning of words that have a powerful heritage and profound significance to the proletariat. Of course, the word is often linked to previous or existing 'communist states' and 'communist parties'. However, I agree with Hardt and Negri that these states and parties are generally manifestations of state capitalism rather than of communism. The errors and defeats of previous communist experiments and the dead hand of capitalist forms of praxes calling themselves communist continue to weigh heavily on the proletariat, making it difficult to speak of communism without 'corpses in our mouths'. Reclaiming and speaking of communism in a positive sense recognises the genuine communist heritage, which opposes authoritarianism, repression, war and terror, and illuminates its praxes of freedom, democracy, peace and love. Communism has been the enemy common to many neo-liberal, social democratic, fascist and socialist regimes and those identified as communists have been targeted and murdered in their millions during the global class war to break proletarian power. Today these communist victims and the victims of 'communism' 'haunt the world'. But communism is not a ghost, not even "a positive ghost" (Negri in Casarino and Negri: 2008: 200), rather communism is a movement, or movement of movements, and is very much alive. It is this living movement of movements that continues to threaten, challenge and go beyond capital. When I began this thesis, the world was at war and the people of the globe had been told: "Either you are with us or you are with the terrorists" (Bush: 2003). As terror and fear spread, there were growing threats to 'academic freedom' and 'freedom of speech' from those backing the Bush administration's agenda. When Negri was invited to speak at an academic conference in Sydney in 2005 he was publicly denounced as a terrorist in and by major media outlets and the event was cancelled (see Chapter One). Just as Negri was dragged in I977 from the academy in a previous 'state of emergency', to rot in jail under preventative detention for alleged terrorist activity, in the current global 'war on terror' others have fallen victim to a continuous 'strategy of tension'. Dr Andrej Holm and Dr Matthias B were arrested in Berlin in 2007 under anti-terrorist laws and alleged by police to have written, in academic publications, 'phrases and key words' also used by a militant group and of being intellectually capable of authoring the group's 'sophisticated texts'. Liliany Oblando, a Colombian sociologist, was charged in 2008 with 'rebellion' and 'managing resources related to terrorist activities' while investigating right-wing death squads. Both within the academy and outside it, this is a dangerous time to choose the latter option of 'either with us or against us' and to challenge those who seek to silence dissent, curtail critical debate and label opponents of capital, war and repression as 'traitors' and 'terrorists', while they defend an established order that is in fact terroristic. Hardt and Negri (2004: 33) assert that today "the majority of political scientists are merely technicians working to resolve the quantative problems of maintaining order, and the rest wander the corridors from their universities to the courts of power, attempting to get the ear of the sovereign and whisper advice"- Negri has also argued that "it is more interesting and more useful to make revolution than to write about it" (quoted in Hardt: 2005b: 29). Yet Hardt and Negri (2009: 127) are interested in the kind of academic strategic investigations that have "been forged by professors and students who take their work outside the universities both to put their expertise at the service of the social movements and to enrich their research by learning from the movements and participating in the production of knowledge developed there". In order to learn from proletarian theory and practice, throughout this thesis I provide in-depth analysis of Hardt and Negri's writings and discussions about real world politics, while testing their ideas out on various case studies. The thesis maps the development of Hardt and Negri's thought by offering a historical analysis that locates their writings in relation to class struggle and provides contextual analyses of their key ideas. To avoid becoming fixated on the power of capital requires a focus on how the proletariat's agency is a constituent element of social processes. Helping me to resist becoming a technician of social order or an adviser to the sovereign, I embark on this project as an active militant involved in class struggle. Since "it is not feasible to keep the values that a researcher holds totally in check", Bryman (2004: 21) argues that a researcher's politics will influence a whole variety of presuppositions that in turn have implications for the conduct of the research. Accordingly, Mies (1993: 68) advocates a "conscious partiality" in conducting research, while Mitropoulos and Neilson (2005) argue against "the apparently objective space of an ivory tower-whose recourse to a de-politicisation of knowledge marks the concealment of a politics". Proletarian politics is compelled to an incessant process of polemic, critique and intervention in social relations (Thobum: 2002: 453) and my politics have, to a certain extent, determined and will determine, my choice of research areas, choice of method, the analysis and interpretation of data and the conclusions of the thesis. My work is strongly inï¬‚uenced by my values, beliefs, experiences and the methodological assumption that the proletariat must free itself by collectively breaking with capital- Assisting this process, I believe, requires a mode of enquiry that promotes proletarian subjectivities, constructed on the multitude's movements of self-valorisation. The role of the communist intellectual is to embark "on the project of co-research aimed at making the multitude. The intellectual is thus not 'out in front' to determine the movements of history or 'on the sidelines' to critique them but rather completely 'inside"' where strategic investigation can be "a form of militancy" (Hardt and Negri: 2009: H8, 125). Marx's conception of proletarian praxis, that is the relation of theory and practice, explains how change comes about as people act and learn by taking action. "Struggles are the great teachers" about social developments, the "engines of revolutionary theory" (Negri: 2005b: xiii) and Hardt and Negri (2009: I28) advocate the "strategic production of knowledge" through a variety of routes as an "active engagement with the production of subjectivity in order to transform reality, which ultimately involves the production of new truths". They use the ideas of Raniero Panzieri and Cornelius Castoriadis (in Hardt and Negri: 2009: 24) to explain that "although Marxism is born as sociology, the fundamental task is to translate that sociological perspective into not just political science but really the science of revolution" and "revolutionary research constantly has to follow and be redefined by the forms of social movements". Following this advice, I look to the social movements of the multitude, to a wide variety of praxis as well as to theory, to understand Hardt and Negri's strategic vision, interweaving communist hypotheses with the proletariat's multitudinous struggles.

### Part 4 is the Cold War

#### Central Planning solves everything –

#### 1] Red Innovation –

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4.1. Innovation and social property. Innovation occurs as a result of a long and complex accumulation process of knowledge and creativity, where very rarely is a single individual solely responsible. This is an essentially social process in which a plurality of actors and institutions contribute in very different spheres and circumstances. The Austrian School presents an idealized image of innovation in capitalist economies, attributing it exclusively to the figure of the enterprising entrepreneur — whether in a disruptive sense (Schumpeter), or in a strictly coordinating sense (Kirzner). In fact, the entrepreneurial function develops within specific institutional frameworks and organized structures, both at the micro and macro levels. In this sense, a socialist economy has significant advantages for developing technological and business innovation, as opposed to a capitalist economy: i) socialism allows for greater and more efficient allocation of resources to R&D&I activities, thanks to centralized control of the surplus and the absence of sumptuous consumption and a rentier population; ii) there are no obstacles (property rights) to the free dissemination of new products and techniques; iii) the equal distribution of resources (which guarantees that no basic needs go unmet) allows for discovery and fuller development of talent, which likewise occurs when work is undertaken through tasks that are more balanced for the majority and less routine; iv) in allocating investment, more information is available and the criteria are more varied than mere expectation of profit; v) social ownership is more inclusive and participatory than capitalist enterprise in terms of generating and mobilizing knowledge (tacit or not) and encouraging innovation; vi) socialism does not impose short-term innovation cycles looking to generate products that can be commercialized in, say, four to six months, as is typical in capitalist economies. Under these favorable general conditions, the development of innovation in a socialist economy would unfold in three fundamental areas: i) Strategic planning: this traces the main lines of scientific, technological, and innovation research. Here would enter programs for the development of new technologies and infrastructures, as well as visionary projects that explore eventualities and future scenarios. This sort of research is carried out in universities, scientific academies, technological institutes, and other specialized centers in coordination with the business world. The process would consist in testing different alternative productive projects or techniques in order to verify results, in connection with the companies and sectors being served. ii) Companies: research, design, and innovation departments. iii) Business entrepreneurship: individuals and teams put forward proposals in hopes of securing financing. For any of these three areas, material incentives would exist that reward the degree to which the freely programmed objectives are achieved, in addition to purely social or moral incentives such as social recognition or professional and personal fulfilment. In the next section, we focus on how socialist entrepreneurship — something that the Austrian School considers impossible — would ostensibly work. 4.2. Ecosystems for innovation and entrepreneurship. In today’s most dynamic capitalist economies, entrepreneurship and business innovation are developed mainly in the so-called innovation ecosystems, which are institutional environments dedicated to promoting symbiotic interaction among the different actors involved in the process of creating and transforming companies and industries. This sort of institutional framework represents the antithesis of the liberal mythology where the individual capitalist–entrepreneur operates in a purely commercial environment, since these ecosystems are based on public institutions and resources as well as procedures that are not strictly mercantile.9 An efficient and dynamic socialist economy needs institutional environments capable of fostering and channeling the initiative of individuals with special talents to translate innovative ideas into business projects. It must be clear that an ecosystem of socialist innovation does not substitute for, but instead complements, the innovations developed by particular state institutions and programs (such as the transition to a new source of energy, new materials, etc.) as well 9 In the case of Spain, think tanks and capitalist consultants openly admit that “there is not enough private capital to invest in new companies, either through individual investment or through venture capital funds” (Price Waterhouse Coopers, 2015, 32). as innovations taking place in the industrial design departments of businesses. The actors involved in such an ecosystem are essentially the same as those participating in the equivalent ecosystems of the current capitalist economies. Principal differences would lie in the form of interaction among them (in the absence of mercantile links), their decision-making capacity (since no private property rights adhere), and the types of rules in force (including the incentive system). Among the main actors would be the following:

#### 2] Ecological Leninism –

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The impending catastrophe and how to combat it In the second week of September 1917, Lenin penned a long text called The Impending Catastrophe and How to Combat It. ‘Unavoidable catastrophe is threatening Russia’, it begins; the breath of death is over the land and ‘everybody says this. Everybody admits it. Everybody has decided it is so. Yet nothing is being done.’ World War I, the Urcatastrophe of the century, had haemorrhaged Russia and the other belligerent countries and, so it seemed, put civilisation itself on the deathbed. ‘The war has created such an immense crisis, has so strained the material and moral forces of the people, has dealt such blows at the entire modern social organisation, that humanity must now choose between perishing’ or transitioning to ‘a superior mode of production’. Russia stood before the spectre of famine. The war had so torn apart the country that all production apparatuses and logistical structures that would normally ensure basic provisioning were out of commission and, for as long as the war went on, beyond repair. As if that were not enough, heavy floods in the spring of 1917 washed away roads and railway lines. The crisis took a new plunge in August, when grain prices suddenly doubled and Petrograd faced the challenge of surviving without flour. ‘Famine, genuine famine’, one government official complained, ‘has seized a series of towns and provinces – famines vividly expressed by an absolute insufficiency of objects of nutrition already leading to death’. It was in this situation that Lenin wrote his text. In the run-up to October, he and the Bolsheviks were suspended in a moment of abysmal emergency: war behind them, war to the side of them, famine advancing. Lenin obsessed over the breakdown. ‘We are nearing ruin with increasing speed’, he would write; ‘no progress is being made, chaos is spreading irresistibly’; ‘famine, accompanied by unprecedented catastrophe, is becoming a greater menace to the whole country week by week’. What could be done about it? Part of the answer had already been provided by the states fighting the war. To prevent their food systems from collapsing utterly, they had interfered in markets in a manner that pre-war liberal doctrines would never have licensed. Governments from Paris to Petrograd had ‘outlined, determined, applied and tested a whole series of control measures, which consist almost invariably in uniting the population and in setting up or encouraging unions’ and rationing and regulating consumption. The situation had itself ‘suggested the way out’ by calling forth ‘the most extreme practical measures; for without extreme measures, death – immediate and certain death from starvation – awaits millions of people’. But those measures had an obvious limitation: they dealt with symptoms. The drivers of catastrophe were left untouched. The inter-imperialist war and its primum mobile – simple ordinary capital accumulation – were kept going, leaving procurement systems on the edge or, as in Russia, over it. Here, then, was Lenin’s wager: to take measures of the kind already instituted by the warring states, step them up a notch and deploy them against the drivers of catastrophe. First was to end the war. Second was to get the grain supplies under control, seize stocks from rich landowners, nationalise banks and cartels, end private property in the key means of production – a revolution, as Lenin constantly agitated in these months, to stave off the worst catastrophe, which was why it must not be deferred. Against the Kerensky government’s feeble attempts to restore order, he railed that ‘it is unable to avoid collapse, because it is impossible to escape from the claws of the terrible monster of imperialist war and famine nurtured by world capitalism unless one renounces bourgeois relationships’ and ‘passes to revolutionary measures’. At the same time, his rhetorical gambit was to profess that the means for achieving this were at hand, almost uncontroversial. ‘All the state would have to do would be to draw freely on the rich store of control measures which are already known and have been used in the past.’ Indeed, he alleged that any government that wished to combat the impending catastrophe, whatever its affiliation, would have to take those radicalised measures. The objective logic of the situation left no other choice. Now, if we, for a moment, put aside the very considerable historical complications known to everyone, we can see that the logic of the present situation, mutatis mutandis, is not all that dissimilar. So what kind of control measures could be envisioned? Here we must again stay at the level of a rough sketch. Yes, this enemy can be deadly, but it is also beatable States in advanced capitalist countries could claim to have acted on the dangers of pandemics the moment they made the following announcement: today, we are launching a comprehensive audit of all supply chains and import flows running into our country. With our amazing capacity for surveillance and data collection, we’ll shift from citizens to companies, open their books, conduct thorough inputoutput analyses (of the kind scientists already excel at) and ascertain just how much land from the tropics they appropriate. We shall then terminate such appropriation, by cutting off chains that run into tropical forests and, insofar as any can be classified as ‘essential’, redirect them to other locations. Every Noranda, every Skanska and Engie will be withdrawn. The time has come to pull in the claws of unequal exchange, now a menace to all. We shall pay for tropical areas previously devoted to northern consumption to be reforested and rewilded. This will compensate for lost export revenues – not as charity or even a drain on our budgets, but as a running investment in the habitability of this planet, an establishment and maintenance of sanctuaries on which our health depends. We are here simply adhering to the categorical recommendations from scientists (whom we’ll put on the stage for regular briefings on national television): There is an urgent need to stop deforestation and invest in afforestation and reforestation globally. In response to the viral outbreaks, billions of dollars are spent on eradicating the infection, providing services to humans, and developing diagnostic, treatment and vaccination strategies. However, no or less attention is given to the primary level of prevention such as forestation and respecting wildlife habitats. The world should realize the importance of forests and the biodiversity carrying deadly viruses – this from four China-based scientists, venting some despair amid Covid-19. Similar advice has been given for years. ‘The most effective way to prevent viral zoonosis is to maintain the barriers between natural reservoirs and human society.’ Barriers? There is a force at work in human society that by its very nature cannot countenance such a thing. But again, the scientists: ‘The most effective place to address such zoonotic threats is at the wildlife-human interface. A key challenge in doing this is to simultaneously protect wildlife and their habitats’ – the most effective, and the most costefficient. ‘Allocation of global resources from high-income countries to pandemic mitigation programs in the most high-risk EID [emerging infectious disease] hotspot countries should be an urgent priority for global health security’, says the Pike paper. It estimates a tenfold return on such investment. Written six years before Covid-19, it speculates on the damage a zoonotic pandemic could wreak on the world economy and finds that mitigation at the source – reining in trade-driven plantations, livestock, timber, mining – would be a fantastically optimal way of saving money. This is evidently not a guarantee that it will happen. But the northern states of our fantasy have now committed themselves to reason and proclaim: this is the right and necessary thing to do, for us and everyone else on this planet. The immediate beneficiaries will be people living in or next to tropical forests, always first in line for spillover. But our control measures will also spare ourselves from living under this Damocles sword to the end of our days. So the war on wild nature starts to wind down. This begins with a ban on importing meat from countries in or bordering on the tropics. Can there be anything more nonessential? And yet beef is, as we have seen, the one commodity most destructive to these wonderlands of biodiversity. Meat consumption in general is the surest way to waste land, and any extensive reforestation – combined with a protein-needy human population of ten billion or more – presupposes its reduction. Mandatory global veganism would probably be the endpoint most salutary for all. It would give some room back to wild nature and disengage the human economy from the pathogen pools; increased meat consumption is the fastest way to dive deeper. But as economies are currently operating, neither vegans nor vegetarians in the North go (as we often like to think) free of guilt: soybean, palm oil, coffee, chocolate flow as much, or even more, into our stomachs. Control measures for addressing spillover should not follow dietary guidelines, but latitudinal gradients and ecological knowledge. Given what we know about bats, their habitats must have priority, be it steak or flapjacks that stream out of them. Clearly it would be the state that would have to do this. No mutual aid group in Bristol could even hypothetically initiate a programme of this kind. ‘We need (for a certain transitional period) a state. This is what distinguishes us from the anarchists’, with Lenin – or with Wallace: ‘In the face of the potential catastrophe, it would indeed seem most prudent to begin placing draconian restraints on existing plantation and animal monocultures, the driving forces behind present pandemic emergence.’ Note the word ‘draconian’. Progressives of all stripes might shudder at it, but they should return to the chapter on the working day in the first volume of Capital – the ten hours’ day being the original victory of the proletariat, realised when enforcement finally became a little harsh, after all the laxities and prevarication of the early factory legislation. One doesn’t curb capitalist exploitation by carrots. Tropical forests have a recent counterpart to the ten hours’ day: the tenure of Lula. Between 2004 and 2012, deforestation in the Brazilian Amazon underwent its most rapid reduction in modern times, all the more remarkable for running against the trends in the rest of Latin America and Southeast Asia. By what means did the Lula governments accomplish this? By turning some degree of hard power on land-hungry capital: expanding protected areas, registering land properties, monitoring rainforests via satellites, enforcing the forest code and actually punishing those responsible for illegal logging. In 2012, the rate of deforestation stood 84 per cent below its peak of eight years prior. The country that holds two million species, or one tenth of the earth’s total, gave its forests a reprieve, slashing CO 2 emissions by some 40 per cent – perhaps the most impressive mitigation of zoonotic and climatic disaster on record. It didn’t last, of course. ‘Rosa Luxemburg has a great line about revolution being like a locomotive going uphill: if it’s not kept moving, it slides back, and reaction wins. The same can be said of reform. Lula’s two terms could have been a good first act in a transition toward something else; but there was no plan for a second act’, as one scholar of Brazil has noted. Instead came the far right and the abolition of every traffic light ever installed in the Amazon. What should really make one shudder is to think of the zoonotic and climatic legacy of Bolsonaro. Then what of China? After SARS, the state took some perfunctory measures to stem the wildlife trade, promulgating laws with loopholes big enough for rhinoceroses to walk through. It allowed for wild animals to be bred on farms (the Huanong Brothers). The protected species list was last updated in 1990 and omitted at least one thousand native species – including bats – the consumption of which was thereby unregulated, regardless of the public health consequences. Penalties were paltry, enforcement lax, ‘high profits and mild punishment driving the dealers’ to continue accumulating capital – until SARSCoV-2 prodded the state to ban the consumption of any wildlife, from freedom or captivity. Scientists and others worried that the legislation would fray this time too. One team from China writing in Science urged a permanent ban on consumption as well as possession, backed up by stiff penalties; Jingjing Yuan and colleagues went a step further and called for ‘sentence to life prison’ for anyone eating wild. Processing, transporting, marketing wild animals should be similarly sanctioned, the state maintaining a list of species authorised for trade – a list that could be periodically shortened – and sending inspectors into the markets on the fly (recalling the factory inspectors). What could be said against such a tough line? It has been argued that the moral norms of consumers should instead be coaxed into sobriety. The argument ignores three factors. First, if SARS was not enough to scare the clientele away from wet markets – research indicates that awareness of the risks did little to put it off – and if SARS-CoV-2 could not be relied on to do the job either, as some signs suggested – online sellers touted medicines containing rhino horn and other rare animal parts as cures for corona – then apparently one cannot entrust this question to individual enlightenment. Second, enforced laws change norms. The prohibition of child labour in factories and slave labour on plantations clinched their status as unacceptable practices; without those laws, some callous exploiters might have continued to this day. The edification may outlast the laws themselves. One of the few success stories Felbab-Brown can relate in The Extinction Market concerns the use of rhino horn for the making of the Yemeni daggers known as jambiyas. When demand soared in the 1970s, this market became a prime culprit in dragging rhino populations to extinction. But then someone intervened. Interestingly enough, the communist government of South Yemen was far more effective in eliminating demand for rhino-horn jambiyas by eliminating the demand for all jambiyas. It banned the possession of all weapons and aggressively collected them. In 1972, the jambiya ban was thus accompanied by a massive campaign to rid the country of them, with even rich and influential families targeted and forced to sell their daggers. When Yemen was reunited under the capitalist north, the communist principle survived. The ban ‘was not only effectively enforced by the [southern] government but ultimately internalized by the country’s population’. Rhinohorn jambiya went out of fashion. This deep into the sixth mass extinction, some similar courage to wage ecological class war would not seem inappropriate. Third, if there is something the corona crisis has taught, it should be that nudging consumers to voluntarily mend their ways is a strategy of the past. The German state didn’t beg its citizens to please consider living differently: it ordered the malls of Steglitz closed and locked the playgrounds in Kreuzberg. When there is a threat to the health or even physical existence of a population, one doesn’t leave it to the least conscientious individuals to play with the fire as they want. One snatches the matches out of their hands. Some have argued that a blanket abolition of the wildlife trade in China would cause financial losses and make people unemployed – figures between 1 million and an improbable 14 million have been floated – which is, of course, the excuse for every facet of business-as-usual. It could carry us all the way to Venus. But ending the wildlife trade is a responsibility for very many more nations than China. Even Germany has been identified as a central transit point for the global trade in pangolins. States have to figure out a way to extirpate this department of capital accumulation in toto; they have repressive powers to reallocate. Barack Obama purported to make crackdowns on wildlife trafficking a priority. Yet at the end of his second term, there were no more than 130 federal wildlife inspectors in the nation; only 38 of 328 ports of entry had such staff on site; their total number of detector dogs amounted to three. Compare this – from benevolent times – to the apparatus for stopping migrants. Here’s another overdue conversion: open borders to people and close them to commodities from the wild; turn ICE and Frontex and other fortress guards into agencies for shutting down the extinction vortexes. But law enforcement would require more than seizures on the border, which can incite suppliers to compensatory killing sprees. It is the middlemen that need to be netted en bloc. The main alternative to such an approach is to legalise the wildlife trade and encourage the ordered establishment of farms (the Huanong Brothers), but the curtain should now be down on this idea. Wild animals shouldn’t sit in cages. Breeding them in captivity and selling them on markets only whets the appetite for their meat, and experience shows that it’s all but impossible to tell the wild from the farmed; the former leaks into the latter, as long as the suck is there. Demand itself will have to be neutralised. Insofar as ostentation – the open display of status before peers and subalterns – is the purpose of wildlife consumption, criminalisation and actual law enforcement should hit where it hurts. Under the ground, public swagger is harder. This doesn’t mean, as Felbab-Brown is keen to stress, that hard state power is a silver bullet. But it is needed, and fast, she points out. ‘Unlike in the case of drugs’ – and most other illicit activities, one may add – ‘time matters acutely, especially when animals are being poached at extinction rates.’ Some reprioritisation is needed for repressive state apparatuses around the world. And then there is the question of bushmeat, an especially difficult nut to crack, which deserves its own separate investigations. One would wish that lifting areas and countries out of poverty would of itself make bushmeat obsolete, but alas, it might have the opposite effect: affluence can set the extinction vortex spinning. It has, on the other hand, been vociferously argued that one shouldn’t even consider taking the wild food out of the mouth of poor people. Unfortunately, that argument is self-defeating, for in the same moment bushmeat starts to endanger animal populations, it ceases to be a prop of food security and turns into its opposite: an exceedingly undependable protein source. Extinction exhausts it forever. The most viable palette of measures probably includes laws and their enforcement, a rollback of deforestation and ‘incentives for communities to switch to traditionally grown protein-rich plant foods’, such as ‘soy, pulses, cereals and tubers’ – breaking, in other words, the association of meat with the good life. That break begins in the richest countries. If anyone has a duty to lead and assist a global turn to plantbased protein, it is them. Needless to say, such measures would just be starters – local drivers of deforestation, for instance, would still have to be dealt with – and if they were all rolled out next week, infectious diseases wouldn’t thereby vanish at the snap of a finger. The treatment of symptoms will never stop being essential. And so one could look to Cuba, which seems to have spare capacity for every eventuality and continues to serve the world as a subaltern ambulance crew, including in this pandemic: in March 2020, fifty-three professionals in a Cuban medical brigade landed in Lombardy. They came to assist the swamped hospitals of one of the richest provinces in Europe. Of the dozen brigades dispatched over that month, others went to Jamaica, Grenada, Suriname, Nicaragua, Andorra, while Cuba itself agreed to receive a corona-stricken cruise ship turned away from other Caribbean islands – all in line with a tradition of ‘medical internationalism’ that never ceases to confound foes and experts alike. In the 2010s, this poor little nation had more health care workers stationed on foreign soil than the G8; more than the Red Cross, Médecins Sans Frontières and UNICEF combined. When Ebola lacerated West Africa in 2014, hundreds of doctors and nurses dashed off to the miasmic front lines; when Hurricane Mitch tore through Central America and Haiti in 1999, not only did Cuban staff pour in, but Havana initiated a scholarship programme for medical students from the disaster zones; when an earthquake crushed Pakistan in 2005, Cuba sent 1,285 health workers for a year. Canada sent six. In a time of chronic emergency, the world should thank its lucky star there’s at least one state with a tenuous link to the communist ideal still around.‘If anything real is to be done, bureaucracy must be abandoned for democracy, and in a truly revolutionary way, i.e. war must be declared on the oil barons and shareholders’: Lenin. His casus belli was their refusal to produce enough oil and coal. He wanted a war on the barons and shareholders to force the pace of extraction – Russia ‘is one of the richest countries in the world in deposits of liquid fuel’ – having no inkling of any adverse effects. Fuel scarcity was part of his breakdown. Our breakdown has the opposite profile, and so, if anything real is to be done, there will have to be a war with another aim: putting this industry out of business for good. This begins with a nationalisation of all private companies extracting and processing and distributing fossil fuels. Corporations on the loose like ExxonMobil, BP, Shell, RWE, Lundin Energy and the rest of the pack will have to be reined in, and the safest way to do that is to put them under public ownership, either through acquisition or – more defensibly – confiscation without recompense. Then their endlessly burning furnaces can finally be switched off. But they should not simply be liquidated, as in dismantling every platform, sealing the holes, closing the offices, sacking the employees and throwing the lot of the technology on the scrap heap. To the contrary, these units have a constructive task ahead of them. It’s already too hot on earth, and it’s getting hotter by the year, and there’s no end in sight to the heating unless emissions are cut to zero – but even then, it will still be too hot plus residual, potentially self-reinforcing heating in the atmospheric pipeline (the more of it, the longer mitigation waits), and so a worldwide cessation of fossil fuel combustion would not be enough. CO 2 would also have to be drawn out of the air. This has been apparent for at least a decade: everybody says this. Everybody admits it. Everybody has decided it is so. Yet nothing is being done. Nothing at all? There are a bunch of start-ups developing machines for negative emissions. One of them, the Swiss-based Climeworks, might be the most valuable capitalist company on earth these days – valuable as in doing humanity what could eventually be a life-saving service. With machines that look like large fans in boxes, Climeworks sucks air – it could be any air, anywhere. The air is led into a filter that captures CO 2 . Once the filter is saturated, it is heated to 100 degrees Celsius, and the result is pure, concentrated carbon dioxide. The trick as such is no magic, as it has long been applied in airtight rooms – submarines, space stations – where CO 2 has to be scrubbed and flushed out for people to breathe. What Climeworks has just demonstrated, however, is that this is the most promising technology for taking CO 2 out of the earth’s atmosphere – far more so than ‘bioenergy carbon capture and storage’, or BECCS, the speculative solution most in vogue in the days of the Paris agreement. There the idea was to establish gargantuan plantations to cultivate fast-growing trees, harvest them, burn them as fuel, filter away the CO 2 and store it under the ground. But more plantations are not what we need. BECCS would devour such monstrous amounts of land – somewhere like the equivalent of all current cropland to stay below 2°C – that tropical forests might well have to be wiped out. Direct air capture needs no land to grow anything. The contraptions can be placed on roofs. The main inputs they crave are electricity and heat, and because they are small and easily switched on and off, they can be affixed to the grid and turned on when there is an excess of wind and sun (weather-determined moments of overproduction often regarded as a drawback of renewables) and use waste heat from any other process (no shortage of that in urban environs). The CO 2 can be mineralised. It can be buried under the ground in solid form; indeed, since 2017, Climeworks is doing just this in Iceland. As with other novel technologies – solar panels spring to mind – prices will nosedive with mass production. A capitalist solution to a problem made by capitalism? If only. A capitalist company has to have a commodity to sell. With the exception of the pilot plant in Iceland, Climeworks and the other start-ups are turning their concentrated CO 2 into goods with exchange-value. It can be gas sold to greenhouses or soft drink producers (Coca-Cola in the case of Climeworks in Zürich); it could go into microalgae or liquid fuel, possibly even for airplanes. Such commodities bury no CO 2 . They capture it and pass it on for release elsewhere, so that a profit can be made – or, as Nature reported regarding another start-up, Carbon Engineering, run by the famed scientist-cum-entrepreneur David Keith: ‘That CO 2 could then be pressurized, put into a pipeline and disposed of underground, but the company is planning instead to use it to make synthetic, low carbon fuels.’ And how could it plan otherwise? Just throwing the CO 2 away, locking it up in cellars where it must never again be touched, is no way to accumulate capital. It negates the logic of the commodity, because non-consumption would here be the innermost essence of the operation. As Holly Jean Buck shows in After Geoengineering: Climate Tragedy, Repair, and Restoration, a primer and clarion call that should be obligatory reading for anyone minimally concerned with planetary futures, this is the contradiction every direct air capture must run into: if it stays inside the commodity form, it cannot make good on its promise of negative emissions. It will recycle CO 2 , not tuck it away. To scale up these machines to the level where they would make their designated difference – supplementing zero emissions with drawdown – they would have to function as vacuum cleaners, sucking up carbon and putting it out of circulation, as a non- or even anti-commodity. How could such a decontamination of the biosphere run on profit? Where would the increment in exchange-value come from, in amounts sufficient to keep the clean-up going like any other department of accumulation? No one has yet come up with a plausible answer. Buck works through the logic and finds only one way out: the state. Other students of direct air capture have reached the same conclusion. It seems to inhere in it – if the Climeworks model turns out to have some unknown disadvantage, if something else comes to the fore as the superior tech, if there will ever be any negative emissions not growing from land, the same conundrum will reappear: resell the waste and forfeit the purpose, or respect the negative use-value. It’s the productive force or the property relations. And to scale up, one would need a lot of money. That money should come from those who carry historical responsibility for releasing the CO 2 in the first place. There would also need to be massive complexes of technical expertise, drilling and seismic skills, infrastructures for transporting concentrated CO 2 , empty holes in the ground for burial vaults, organisations of supranational size … Who has all these things in ample possession? The oil barons and shareholders, of course. Nationalise them, Buck proposes – not just for ‘getting rid of these corporations, as we might like to, but transforming them into companies that deliver a carbon removal service’. Make them public utilities for restabilising climate. In something of an understatement, Buck adds: ‘There will be a lot of struggles to engage in here.’ But now imagine that states were in fact determined not only to stop the drivers of catastrophe but to put them into reverse gear, and so they expropriated every single fossil fuel company and restructured them into waste disposers, while those already state-owned received the same directives – then we would really be on the way to zero emissions and further: towards 400 parts per million, 380, 350 … It would be some repair to match the tropical rewilding. The demand for nationalising fossil fuel companies and turning them into direct air capture utilities should be the central transitional demand for the coming years. But, needless to say, it would make no sense if CO 2 were still belching out into the atmosphere: emitting and capturing would be a bizarre dissipation of resources to no avail. Everything begins with draconian restraints and cuts. They alone could pave the way for actual drawdown; the sooner they start, the less need for a secondary mega-infrastructure of clean-up. The problem could also be attacked from another angle: not supply but demand, rather like in the first phase of the Covid-19 pandemic. Then it was demand, above all in the transport sector, that went off a cliff and pulled emissions along. In late April 2020, Scientific American publicised the forecast that total global emissions would fall by no more than 5 per cent during the year – in spite of the spring drop by one fourth in China and roughly one fifth in the US – as economies were expected to rebound in the summer and autumn. The journal noted that as record-breaking as a 5 per cent reduction would be, it would still fall short of ‘the 7.6 per cent decline that scientists say is needed every year over the next decade to stop global temperatures from rising more than 1.5 degrees Celsius’. Nearly 8 per cent every year – a far cry indeed from the expected 2020 hiatus (if not from the initial months-long collapses). What would that require? Comprehensive, airtight planning. Everybody knows this. Few say it. One can obviously not rely on spontaneous cessation of demand, or on people just quitting travel; there would have to be a continuous substitution of one kind of energy for another over the transitional period – or, ‘a single economic plan covering the whole country and all branches of productive activity. This plan must be drawn up for a number of years, for the whole epoch that lies before us’, to cite Leon Trotsky. One can of course find this idea so repugnant that one would rather give up on the climate of the earth. And that is indeed the choice the dominant classes and their governments wake up to make every morning. Regardless of whether the problem is attacked from the supply or the demand side, the race to zero would have to be coordinated through control measures – rationing, reallocating, requisitioning, sanctioning, ordering … – so as to fill the gap after fossil fuels. The substitutes themselves are in no need of elaboration. The literature on the Green New Deal and renewable energy roll-out and climate wartime mobilisation is extensive enough to guide a transition several times over. Here we truly are in the situation of Lenin’s September text: everybody knows what measures need to be taken; everybody knows, on some level of their consciousness, that flights inside continents should stay grounded, private jets banned, cruise ships safely dismantled, turbines and panels mass produced – there’s a whole auto industry waiting for the order – subways and bus lines expanded, high-speed rail lines built, old houses refurbished and all the magnificent rest. ‘The ways of combating catastrophe and famine are available’, approaching common knowledge. ‘If our state really wanted to exercise control in a business-like and earnest fashion, if its institutions had not condemned themselves to “complete inactivity” by their servility to the capitalists, all the state would have to do’ would be to roll up the sleeves. Another part of Lenin’s logic applies too: any government that would ‘wish to save Russia from war and famine’ would have to get down to this kind of work. be the central transitional demand for the coming years. But, needless to say, it would make no sense if CO 2 were still belching out into the atmosphere: emitting and capturing would be a bizarre dissipation of resources to no avail. But the lingering conclusion from our initial comparison between corona and climate is that no capitalist state is likely ever to do anything like this of its own accord. It would have to be forced into doing it, through application of the whole spectrum of popular leverage, from electoral campaigns to mass sabotage. Left to its own devices, the capitalist state will continue to attend to symptoms, which, however, must eventually reach a boiling point. One can imagine that in the next years and decades, storms will bite into property, droughts tear apart supply chains, crop yields halve, heat waves enervate labour productivity to the extent that the timeline of victimhood catches up with the dominant classes. The second contradiction will then be upon them. States might no longer be able to just parry the impacts, but feel compelled to safeguard the background condition before it crashes irretrievably. Judging from the reaction to Covid-19, they will grasp for a control measure that can flatten the curve at once, and there is one such known in the libraries of science: solar geoengineering. Spraying sulphate aerosols into the atmosphere is the single kind of injection with a potential to instantly reduce planetary fever. However large in scale, direct air capture would need decades to bring temperatures down; sulphate aerosol injection can cut insolation from one month to the next. Year after year of business-as-usual, this is the pseudo-solution that sneaks up on us like a thief in the night.Indeed, under the cover of the pandemic, in mid-April 2020, one of the largest experiments in geoengineering so far was carried out on the Great Barrier Reef, then subject to the third outbreak of mass bleaching in five years (did anyone notice?). Scientists were authorised by the state to spray trillions of nano-sized ocean salt crystals into the air from the back of a barge. The hope was that these particles would make clouds brighter, so they would reflect more sunlight away from the ocean and shield the reef from the heat. The team told the Guardian they could see corals ‘bleaching around us’ as they bobbed over them. This is a technology distinct from sulphate aerosol injection, namely marine cloud brightening, potentially deployed on a local or regional scale by a state such as Australia, which, numerous monumental disasters notwithstanding, cannot bring itself to impose any control measures on coal extraction. The logic is robust. As one of the sharpest scholars in the field, Kevin Surprise, has argued, solar geoengineering might well be launched on a planetary scale as a fix against the second contradiction, because capitalist states appear constitutionally incapable of going after the drivers. It is fairly widely known that such intervention in the climate system could switch the planet onto another track towards catastrophe. Meanwhile, the corals keep bleaching, the swarms forming, the ice melting, the animals moving. A pestilential breath devastating humanity There has been a lot of talk about ecological Marxism in recent years, and with the chronic emergency over us, the time has come to also experiment with ecological Leninism. Three principles of that project seem decisive. First, and above all, ecological Leninism means turning the crises of symptoms into crises of the causes. From August 1914, this was, of course, the thrust of Leninist politics: converting the outbreak of war into a blow against the system that engendered it. Our Great War is not an actual war between armies, nor a singular event that can be concluded or paused after half a decade: this emergency is chronic, which means that crises of symptoms will ignite again and again, and every time they do, the strategic imperative must be to switch energies of the highest voltage against the drivers. It is difficult to see how else the conditions can ever be ameliorated. Has anybody got another idea? Oh yes: make clouds and invent vaccines; block solar radiation and track the movements of people. At their best, such proposals amount – to borrow from Greta Thunberg’s favourite metaphor – to surviving inside a burning house by drinking lots of cold water. Virtually by definition, the most classical Leninist gesture is the only one that can point to an emergency exit. It is worth re-emphasising just how central the category of catastrophe was to the evolution of revolutionary Marxism. In her polemics with Bernstein, Luxemburg never tired of stressing it. She has become most renowned for the sound bite ‘socialism or barbarism’ but, as Norman Geras has shown in a superb exegesis, that deep dichotomy structured her theory and praxis all the way from the battle with Bernstein to her death at the hands of the Freikorps. One year into the war, she warned that humanity faced a choice between ‘the destruction of all culture, and, as in ancient Rome, depopulation, desolation, degeneration, a vast cemetery’ – or victory for ‘the conscious struggle’ against the imperialism that drove the war. ‘Wading in blood and dripping in filth’, capitalist society has become ‘a pestilential breath, devastating culture and humanity’. That peculiar type of society now ‘endangers the very existence of society itself, by assembling a chain of devastating economic and political catastrophes’; in its present phase, the expansion inherent in capital ‘has adopted such an unbridled character that it puts the whole civilisation of mankind in question’. Luxemburg expected world war to become a ‘permanent’ state of affairs. It didn’t, and here the differentia specifica of the chronic emergency must again be underscored: it works itself out through biophysical processes that cannot be fought or negotiated to an end. One does not bomb out or bargain with the radiative forcing of CO 2 . That forcing is an immutable function of the quantity of the gas in the atmosphere, which means that this pestilential breath has another order of permanency and aggravation – until the moment of deliberate intercession, still only hypothetical. Following Geras’s reading of Luxemburg, we can then say that ‘barbarism’, depopulation, a vast cemetery really are the inevitable ends of a capitalism left to itself (here precluding the long-term effectiveness of solar geoengineering as a stand-alone measure). But writing in 1975, he recoiled from this conclusion as excessively apocalyptic. ‘Ecological catastrophe may, today, be invoked to lend that vision plausibility’, he noted in passing; half a century later, there is scant need for the caveat. This, then, is the syntax of revolutionary Marxism, present already in the first section of The Communist Manifesto: the fight ends ‘either in a revolutionary reconstitution of society at large, or in the common ruin of the contending classes’. There can be little doubt about which of the two outcomes is currently the more likely. Hence the accentuated ‘conditional mood of the probability of a catastrophe that there is still time to forestall. Things will end up badly, if … But they can (still) be sorted out …’, as another thinker from the same tradition, Daniel Bensaïd, distils the predicament. It was because Luxemburg threw herself into efforts to forestall further catastrophe that she, for all their disagreements, ended up on the same side as Lenin. A second principle for ecological Leninism can be extracted from their position: speed as paramount virtue. ‘Whether the probable disaster can be avoided depends on an acute sense of conjuncture’, writes Bensaïd, who reconstructs the crisis of September and observes that ‘waiting was becoming a crime’. Or, with Lenin himself: ‘delay is fatal’. It is necessary to act ‘this very evening, this very night’. The truth of these assertions has never been more patent. As anyone with the barest insight into the state of the planet knows, speed, very regrettably, because of the criminal waiting and delaying and dithering and denying of the dominant classes, has become a metric of meaning in politics. ‘Nothing can now be saved by halfmeasures.’ Third, ecological Leninism leaps at any opportunity to wrest the state in this direction, break with business-asusual as sharply as required and subject the regions of the economy working towards catastrophe to direct public control. It would mean that ‘one part of the population imposes its will upon the other part’, to speak with Engels. Nothing from the past decades of stalled transitions indicates that ExxonMobil would like to metamorphose into a cleaner and storekeeper of unsalable carbon, or that meat and palm oil companies would gladly let their pastures and plantations be rewilded. It appears tautologically true that an actual transition would require some coercive authority. If anarchists would ever wield influence in such a process, they would quickly discover this circumstance and, just like anybody else, have to avail themselves of the state. But what state? We have just argued that the capitalist state is constitutionally incapable of taking these steps. And yet there is no other form of state on offer. No workers’ state based on soviets will be miraculously born in the night. No dual power of the democratic organs of the proletariat seems likely to materialise anytime soon, if ever. Waiting for it would be both delusional and criminal, and so all we have to work with is the dreary bourgeois state, tethered to the circuits of capital as always. There would have to be popular pressure brought to bear on it, shifting the balance of forces condensed in it, forcing apparatuses to cut the tethers and begin to move, using the plurality of methods already hinted at (some further outlined by the present author in How to Blow Up a Pipeline: Learning to Fight in a World on Fire). But this would clearly be a departure from the classical programme of demolishing the state and building another – one of several elements of Leninism that seem ripe (or overripe) for their own obituaries. On the other hand, the chronic emergency can be expected to usher in pronounced political volatility. ‘The deeper the crisis, the more strata of society it involves, the more varied are the instinctive movements which crisscross in it, and the more confused and changeable will be the relationship of forces’, to quote Georg Lukács. The rather startling measures used to combat the spread of Covid-19 might have been a foretaste. Who knows what openings other moments of impact might bring. In some, popular initiatives may rise to prominence. The 2013 edition of the ‘worldwide threat assessment’ compiled by the US intelligence community warned that climate disasters risk ‘triggering riots, civil disobedience, and vandalism’; similar predictions are legion. If or when they are fulfilled, the mission of ecological Leninists is to raise consciousness in such spontaneous movements and reroute them towards the drivers of catastrophe. Hence the heightened relevance of the slogan that for Bensaïd ‘sums up Leninist politics: “Be ready!” Be ready for the improbable, for the unexpected, for what happens.’ It includes a readiness to, with Lenin’s own words, ‘set to work to stir up all and sundry, even the oldest, mustiest and seemingly hopeless spheres, for otherwise we shall not be able to cope with our tasks’. If the matter is exigent, the material at hand must be used. On this view, ecological Leninism is a lodestar of principles, not a party affiliation. It does not imply that there are any actual Leninist formations capable of seizing power and implementing the correct measures – the world has never been shorter on them, and most of the few that remain show overt signs of infirmity. The old Trotskyist formula ‘the crisis of humanity is the crisis of the revolutionary leadership’ must be updated. The crisis is the absence – the complete, gaping absence – of any leadership. The seed bank exists in an arid space approaching empty desert; anything brought out from it would have to be genetically modified to grow under the present sun and watered by subjects inventing themselves anew. Two elements do, however, as we have argued, appear essential. The basic make-up must harbour a predisposition for emergency action and an openness to some degree of hard power from the state. Anarchism detests the state; social democracy shrivels in catastrophe. But there is no reason not to experiment with ecological Luxemburgism, or ecological Blanquism, or Guevarism, or indeed Trotskyism … nor is there reason to give up on the sheer deductive force of revolutionary Marxism: ‘The inherent tendencies of capitalist development, at a certain point of their maturity, necessitate the transition to a planful mode of production, consciously organised by the entire working force of society – in order that all of society and human civilisation might not perish’, again with Luxemburg. But ‘necessitate’ does not mean ‘preordain’. Something can be necessary and yet never come about.

#### 3] Marxist Transhumanism –

Steinhoff 14 [James Steinhoff (postdoctoral fellow at the eScience Institute of the University of Washington, Ph.D., Media Studies, The University of Western Ontario, M.A., Philosophy, The University of Windsor, B.A., English Literature and Philosophy, The University of Windsor). “Transhumanism and Marxism: Philosophical Connections”. Journal of Evolution and Technology - Vol. 24 Issue 2 – May 2014. Accessed 11/5/21. <https://philpapers.org/archive/STETAM-4.pdf> //Xu]

The term “transhumanism” was coined by evolutionary biologist Julian Huxley in 1957. In a short paper bearing the same neologism as its title, he asserts that: The human species can, if it wishes, transcend itself – not just sporadically, an individual here in one way, an individual there in another way, but in its entirety, as humanity. We need a name for this new belief. Perhaps transhumanism will serve: man remaining man, but trans­cending himself, by realizing new possibilities of and for his human nature. (Huxley 1957) This early formulation contains the kernel of transhumanism, which is the desirability and feasibility of the self-directed evolution or transcendence of humanity beyond its current form or nature. Recently, philosopher Max More has offered this more precise definition: Transhumanism is both a reason-based philosophy and a cultural movement that affirms the possibility and desirability of fundamentally improving the human condition by means of science and technology. Transhumanists seek the continuation and acceleration of the evolution of intelligent life beyond its currently human form and human limitations by means of science and technology, guided by life-promoting principles and values. (More 2009) Transhumanism indicates a transitional state on the road to a posthuman state. This transition is to be accomplished primarily by technological means in a transfer of control over the process of evolution from natural selection to conscious human direction. The possibility of taking control of evolution is not a specifically transhumanist belief. Diverse non-transhumanist thinkers such as political scientist Francis Fukuyama and sociobiologist E.O. Wilson acknowledge the coming reality of “volitional evolution” or “a species deciding what to do about its own heredity,” as Wilson puts it (1998, 299). What is distinctly transhumanist is the optimism with which the prospects of volitional evolution are regarded. Fukuyama calls for “humility” regarding human nature and fears that transhumanists will “deface humanity with their genetic bulldozers and psychotropic shopping malls” (Fukuyama 2004). Transhumanists, by contrast, desire to use such new and emerging technologies as genetics, robotics, artificial intelligence, and nanotechnology to achieve ambitious goals: the elimination of disease; radical life extension (even immortality);1 the creation of substrate-independent minds (capable of being uploaded to non-biological systems);2 augmented or virtual realities; and enhanced intellectual, physical, aesthetic and ethical capabilities. Some transhumanists even aim at the abolition of all forms of suffering for all sentient life.3 This is not to say, as many critics have, that transhumanists blithely dismiss the prospects of technological advancements going horribly wrong. Nick Bostrom, in particular, has written much about “existential risks” or the possibilities that new technologies present for the extinction of life on earth (Bostrom 2002). Nonetheless, many transhumanists prefer a “Proactionary Principle” of rational risk-assessment, as More (2005) puts it, as opposed to a “Precautionary Principle” of excessive safeguarding regarding technological developments. Politically, transhumanists have covered the spectrum. Proto-transhumanists such as molecular biologist J.D. Bernal and geneticist/evolutionary biologist J.B.S. Haldane were Marxists, Bernal being a member of the Communist Party of Great Britain, while Haldane was an external supporter of the Party. Riccardo Campa, chair of the Associazione Italiana Transumanisti (AIT), expresses “only conditional confidence” in the power of markets and asserts that if “market mechanisms do not deliver, we should have to consider socializing what are, from the transhumanist point of view, the key sectors” (Campa 2008). On a different note, Max More and most of those subscribing to his brand of transhumanism (known as Extropianism) originally espoused anarcho-capitalist views. However, in the past decade More has tended more toward liberal democracy. Ray Kurzweil has not written explicitly on his political stance, but one can safely assume that his views lie somewhere not far from liberal, capitalistic democracy, given his entrepreneurial career and frequent assertions of liberal democratic rights. H+ (formerly The World Transhumanist Association), of which Nick Bostrom is a co-founder, is explicitly a liberal democratic organization. In the past few years, rumors and accusations concerning transhumanist fascists have been buzzing about the Italian transhumanist community. The “overhumanists” or “sovrumanists” (from the Italian “sovrumanismo”), a group of members within the ITA, have been accused of fascist tendencies.4 As I have not been able to read any of the purportedly fascist texts (Stefano Vaj’s Biopolitica being the most prolifically accused), I leave this discussion untouched. Suffice to say that the allegations lend some support to an appearance that transhumanists range widely across the political spectrum. James Hughes (2001) suggests that leftist thought and transhumanist ideas parted ways after the experience of Nazi eugenics and that the two are only beginning to meet up again indirectly: through Donna Haraway’s cyborgology, speculative fiction, some radical green movements, and various other dispersed projects. Hughes, himself a transhumanist sociologist, argues for a “democratic transhumanism.” He writes: “For transhumanism to achieve its own goals it needs to distance itself from its anarcho-capitalist roots and its authoritarian mutations, clarify its commitments to liberal democratic institutions, values and public policies, and work to reassure skittish publics and inspire them with Big Projects” (Hughes 2001). Yet as the WTA survey shows, 47 per cent of transhumanists surveyed identify as “left,” so transhumanism and the left would seem to have already been reunited. Perhaps the pertinent thing to do now is to search around “inside” the left for useful political bits and pieces that do not originate from liberal democracy – particularly, Marxism. 2. Technological advancement and revolution 2.1 Marxism is a staunchly materialist philosophy. It rejects all notions of higher realms, “spirit,” and immaterial substance. Marx’s philosophy is an appropriation of the Hegelian dialectical form, but Marx rejected Hegel’s assertion that the subject of the dialectical movement is abstract spirit or mind that exists above humans and achieves its true form as Absolute Knowledge. For Marx, thought must begin with “real premises from which abstraction can only be made in imagination … [from] real individuals, their activity and the material conditions under which they live” (Marx 1978, 149). “Life is not determined by consciousness,” says Marx, “but consciousness by life” (Marx 1978, 155). Marxism is concerned with the concrete, material details of the lives of individuals. The material conditions of the relations and means of production produce the situations and systems in which individuals live and by which their conceptions of reality are determined. The social problems of private property and alienation arise from the material reality of the means of production being owned by the capitalist class. Thus Marx’s projected socialist revolution has as a necessary condition a change in the material conditions of society. We can note two key aspects of revolution for Marx. First, revolution must be eminently practical and not merely theoretical. Marx writes: “all forms and products of consciousness cannot be dissolved by mental criticism … only by the practical overthrow of the actual social relations ... that not criticism, but revolution is the driving force of history” (Marx 1973, 164). The socialist revolution will not occur because scathing critiques of capitalism are written, or even by widespread understanding of the contradictions of capitalism – the actual relations of production must be overturned by real people. Workers must seize the means of production. This, however, can only be achieved, Marx says, through the advancement of the productive forces. Thus the second key aspect: that technological advancement is a necessary precondition for revolution. Marx holds that to achieve a socialist society one of the first priorities of the revolutionary proletariat must be to “centralise all instruments of production in the hands of the State … to increase the total of productive forces as rapidly as possible” (Marx 1978, 490). Through automation and new technologies, the productive forces should be enhanced so that less and less actual human labor is required to produce the goods necessary for satisfying human needs. The idea is that humans need to have easy access to and abundant quantities of the necessities of life (including time itself) if they are to seek a way of life beyond mere survival. Marx holds: “slavery cannot be abolished without the steam-engine and the mule and spinning-jenny, serfdom cannot be abolished without improved agriculture … people cannot be liberated as long as they are unable to obtain food and drink, housing and clothing in adequate quality and quantity” (Marx 1978, 169). It is thus only in a society in which machines perform much of the labor required for human survival that humans can achieve revolutionarily new ways of living. 2.2 Most transhumanists are also materialists. The 2007 WTA Survey shows that 64 per cent of those surveyed identify as secular/atheist, while 31 per cent are spread widely across several subcategories of “Religious or spiritual” identifications and 5 per cent describe their beliefs as “Other.” Even the non-secular transhumanists agree that changes to the material conditions of the world are instrumental to the achievement of transhumanist revolution. Indeed, The Mormon Transhumanist Association (MTA) proclaims that humanity’s power over the material world is what will lead to a realization of the objects of traditionally spiritual yearning. The MTA website lists “affirmations” such as: We believe that scientific knowledge and technological power are among the means ordained of God to enable [the spiritual and physical] exaltation [of individuals and their anatomies, as well as their communities and environments] including realization of diverse prophetic visions of transfiguration, immortality, resurrection, renewal of this world, and the discovery and creation of worlds without end.5 It is therefore safe to say that all transhumanists agree that technological development is necessary for revolution, although it is true that for transhumanists what counts as advanced technology is considerably beyond anything imagined by Marx. Many transhumanists posit the technological Singularity as a necessary precondition for their sense of revolution, which is the transition to a posthuman state. On one popular interpretation, the Singularity is the projected moment in the future when artificial intelligence (AI) reaches human-level capabilities. Since technology evolves at an exponential rate far exceeding biological evolution, the theory is that AI will quickly outstrip human intelligence by several magnitudes and will continue to evolve at blinding speed. This explosion of intelligence will produce unimaginable change, advanced technologies, and ideas that will be essential in the creation of the posthuman. Ray Kurzweil calls the advent of human-level AI an event of importance equaling the advent of biology itself (2005, 296). While not all transhumanists are Singularitarians, it is always the prospects of advanced technology that make a transhumanist revolution feasible. Goals such as radical life extension, increased cognitive capacity, and increased well-being are generally not sought through spiritual or mystical means such as transcendental meditation, revelation, or divine communion, but through the increasing sophistication of technology. Thus transhumanists support research programs and/or business ventures they believe will advance the human ability to revolutionarily modify the material world. Nick Bostrom emphasizes the narrow locus of transhumanist change: As you advance, the horizon will recede. The transformation is profound, but it can be as gradual as the growth that made the baby you were into the adult you think you are. You will not achieve this through any magic trick or hokum, nor by the power of wishful thinking, nor by semantic acrobatics, meditation, affirmation, or incantation. And I do not presume to advise you on matters theological. I urge on you nothing more, nothing less, than reconfigured physical situation. (Bostrom 2010, 4) Also evident here is a call for practical, rather than merely theoretical, revolution in the transhumanist openness to synthetic augmentation of the biological body and brain. Nanotechnology, for example, is a commonly cited way of augmenting the material condition of the body: it has been suggested that digestion, healing, and synaptic processes will be augmented or taken over by nanobots that will perform these functions better. Says Bostrom: “The roots of suffering are planted deep in your brain. Weeding them out and replacing them with nutritious crops of well-being will require advanced skills and instruments for the cultivation of your neuronal soil” (2010, 6). The idea is that practical modification of the human condition at the bodily level is needed to produce social change – theorizing is not enough. We may have to download our consciousnesses to synthetic systems to conquer death. In Bostrom’s words: “Your body is a deathtrap … You are lucky to get seven decades of mobility; eight if you be Fortuna’s darling. That is not sufficient to get started in a serious way, much less to complete the journey. Maturity of the soul takes longer” (2010, 4). Ignoring the poeticism of “the soul” here, the notion is that augmented bodies that are less susceptible to disease, hunger, and decay could give people more time to concern themselves with their freely chosen life-activities instead of the vagaries of quotidian existence and the demands imposed by capitalism. Nanotechnology also presents the theoretical possibility of assemblers that can manipulate matter at the molecular and atomic levels to construct anything conceivable by the laws of physics.6 Such machines would need only a supply of raw materials to work with, coupled with a power supply and instructions, to produce all kinds of human needs and wants, ranging from computers to tools to the very Star Trek-esque possibility of food and drink. Echoing Marx, transhumanists might say that the abolition of (paid) slavery is impossible without a superabundance provided by molecular assemblers or that liberation from the bodily death trap is impossible without strong AI. 2.3 Here is the first point that Marxists should take note of: the extent of technological development required for a revolutionary shift in human existence might be much higher than merely the massive automation of labor. Advanced or theoretical technologies such as molecular assemblers might be required to wrest production from the hands of the capitalists. Molecular assemblers present the possibility of very cheap production of almost any product. It is surely too optimistic to say that molecular assemblers might lead to the total destruction of the commodity form, but it seems likely that even a moderately wide spread of such technology would seriously undermine the capitalist system.7 There would simply be no need for the industrial production of most products if families or communities were able to produce those products themselves. Advanced technological development not only presents the possibility of the elimination of dehumanizing labor. It presents more fundamental changes in the material basis of production – the potential elimination of the feasibility of large-scale centralized production and potentially the destruction of exchange-value. Marx understands exchange-value as an abstraction, determined solely by market forces, tacked onto an object that obscures its actual qualities or use-value (Marx 1978, 307). With widespread molecular assembling technology available, the cost of a product would be reduced almost to the cost of information – the instructions required for the assembler to build that product – since raw materials would be of minimal cost and the machine would perform the labor of assembling. Of course, if information remains commodified then a capitalist system could continue to thrive. However, we are currently witnessing the difficulties with commodifying information in the Global North’s “war on piracy.” It seems unlikely that anything short of an openly totalitarian regime could effectively stamp out information piracy. In short, transhumanism contains an exhortation to Marxists to keep abreast of the particulars of new technologies and to engage with them critically, looking for the unique revolutionary (and counter-revolutionary) potentials they hold. Transhumanists should here consider that Marx argues that the centralization of the productive apparatus by the revolutionary proletariat is of fundamental importance to the acceleration of productive capacity. This is because, for Marx, capitalist production divorces or alienates the worker from the activity she engages in, subjecting her instead to “alien” powers – her employer’s need for profit. Marx elaborates: the division of labour offers us the first example of how … as long as a cleavage exists between the particular and the common interest, as long, therefore, as activity is not voluntarily … divided, man’s own deed becomes an alien power opposed to him, which enslaves him instead of being controlled by him. For as soon as the distribution of labour comes into being, each man has a particular, exclusive sphere of activity, which is forced upon him and from which he cannot escape. (Marx 1845) Her labor, which is all the worker owns, is divorced by capitalism from her interests and goals – she is alienated from herself and her essential ability of self-determination. Transhumanists, by leaving technological advancement in the hands of profit-driven capitalist enterprise, are analogously alienating the human that is to be transcended from itself. Capitalism enslaves humans to economically profitable, but, in terms of transhumanist goals, conservative or regressive endeavors. Think of the production of cheap, disposable dollar-store toys or the infinite cycle of the military-industrial complex. Centralization of production offers the prospect of stripping away those endeavors that do not serve to advance the technological apparatus necessary for transhumanist goals. In short, I suggest that the advance of technology, if divorced from human self-determination, may not present revolutionary opportunities, but rather the opposite. 3 Human nature 3.1 For Marx, humans have a dual nature: both active and passive. He offers this description: Man is directly a natural being. As a natural being and as a living natural being he is on the one hand furnished with natural powers of life – he is an active natural being. These forces exist in him as tendencies and abilities – as impulses. On the other hand, as a natural, corporeal, sensuous, objective being he is a suffering, conditioned and limited creature, like animals and plants. That is to say, the objects of his impulses exist outside him, as objects independent of him; yet these objects are objects of his need – essential objects, indispensable to the manifestation and confirmation of his essential powers. (Marx 1978, 115) We can note three important points in this passage: that humans are “natural,” that humans are active or determining – that we can change ourselves and the world, and that humans are also passive or determined by a particular biological nature. The passive aspect of human nature refers to the fact that humans do not exist purely of themselves like omnipotent deities. To exist, humans must fulfill certain needs that are external to their bodies and are not aspects of their selves. Obvious examples are food and drink, but as Herbert Marcuse notes: “‘need’ is not be understood only in the sense of physical neediness: man needs ‘a totality of human manifestations of life’” (1973, 23). For example, having all one’s physical needs met, but being completely isolated from all contact with other humans is not a situation in which human needs are being met. That humans are needy means that they are in a large sense passive beings. One is necessarily dependent on the water’s being there before one can drink it – and without it, death is certain. Thus, Marcuse holds that for Marx: “Distress and neediness here do not describe individual modes of man’s behavior at all: they are features of his whole existence” (Marcuse 1973, 21). Marx holds that since external objects are essential to life, they are actually parts of human life. The passivity of humans means that their lives are determined to the extent that they must meet certain needs to continue existing – there are certain constraints on human life. These limits constitute a fundamental connection to the natural. But as Marcuse noted above, human needs are not only physical needs. There are also what might be called social needs which constitute a fundamental connection between the individual and other individuals in society. Humans need other humans for non-material needs such as education, friendship, and culture. Uniquely human (as far as we can tell) qualities, such as culture, require human beings to be social beings; thus sociality is part of human nature. But humans are also active, self- and world-determining beings. Humans have the ability to relate to objects “universally,” through labor. Human labor produces objects: buildings, computers, medicines. All of these creations we regard as created by “us” – as humans – out of the raw materials found in nature. In producing such objects we constitute a world in which we see ourselves everywhere. Says Marx: “Man is a species being, not only because in practice and theory he adopts the species as his object (his own as well as those of other things), but – also because he treats himself as the actual, living species: because he treats himself as a universal and therefore a free being” (Marx 1978, 75). While animals produce nests and dams these are only for “immediate physical needs,” while “man produces universally … man produces even when he is free from immediate need and truly produces in freedom therefrom” (1978, 76). The endless creation of new objects and technologies supports Marx’s claim: we do not produce technologies solely for survival – we produce in an aesthetic mode, as well as a profiteering mode. Indeed, and this is Marx’s most important claim about human nature, we actually produce ourselves in other objects. Marx’s proclamation that “man produces man” does not refer solely to biological reproduction (Marcuse 1973, 25). Humans produce a world in which every object has some amount of human involvement in it – the human species becomes universally present. But what is the distinctive stamp of humanity, the “essence” that it imparts to objects? Marx’s sense of essence must be recognized as wholly material. He holds that what philosophers have called the substance or essence of the human is a “material result” ... [a] sum of productive forces, capital funds and social forms of intercourse, which every individual and generation finds in existence as something given” (Marx 1973, 165). At any moment how humans conceive of themselves is a product of the social and material conditions that previous generations of humans set up. Human “essence” is a historical phenomenon. But this does not mean that humans lack a true nature. Marx writes: “The animal is immediately identical with its life-activity. It is its life-activity. Man makes his life-activity the object of his will and of his consciousness. He has conscious life-activity … his own life is an object for him” (Marx 1978, 76). The “essence” of the human shifts over time because it is not a static form. It is, rather, a self-transformative function or an evolving process. The human is the animal whose nature is to change its own nature. We are thus led to another relevant aspect of Marxian human nature – its open-endedness. Marx describes the new kind of “wealth” that socialist society will produce as the “absolute working-out of [human] creative potentialities, with no presupposition other than the previous historic development, which makes this totality of development, i.e. the development of all human powers as such, the end in itself, not as measured on a predetermined yardstick” because he is not committed to a particular form of human life or metric by which to judge it (Marx 1973, 488). István Mészáros elaborates, asserting that never “can there be a point in history at which we could say: ‘now the human substance has been fully realized.’ For such a fixing would deprive the human being of his essential attribute: his power of ‘self-mediation’ and ‘self-development’” (Mészáros 1970, 119). It is impossible to posit an ideal ending to the saga of human history as that would constrain the freedom of the human by not allowing her very nature of self-determination to be expressed. 3.2 Transhumanists generally agree with the natural being of the human but they tend to differ from Marx on the significance of humanity’s active and passive aspects, emphasizing the active nature of humans and downplaying the significance of the passive and needy aspect.8 Most transhumanists agree that humans are natural beings and are products of natural processes like natural selection. Humans are distinguished from other animals primarily by their level of complexity (biological and social) and ability to modify their own ways of living. It is material aspects that make humans different: our particular brains, bodies and technological capabilities. Transhumanists do not deny the passive and needy aspects of human nature, although they do question the permanence and desirability of human needs. Nick Bostrom argues that: “not just any aspect of present human nature ... is worth preserving. Rather it is especially those features which contribute to self-development and self-expression, to certain kinds of relationships, and to the development of our consciousness and understanding” that should be preserved (Bostrom 2005). Some human needs may be eliminated entirely through technology. The nutritive aspect of eating might, for example, be separated from the gustatory, just as the pleasurable aspect of sex has largely been separated from its reproductive function through contraceptive technologies. Nutrients and calories could be supplied through smart drugs, supplements, and nanotech delivery systems, and nanobots might filter out unwanted aspects of digested food, making eating a wholly aesthetic experience. The need for human social interaction is already being partially met through technological alternate-realities such as the online worlds Second Life and World of Warcraft and myriad social networking sites. Such virtual worlds, while currently primitive, are being increasingly seamlessly integrated with “real reality.” Courtship, funerals, marriages, and complex economies already occur in virtual worlds. Kurzweil suggests that we might find living in virtual worlds preferable once they reach a high level of sophistication (1995, 29). The idea is that human needs are subject to change and even disappearance as the human being develops. It is clear then that transhumanists generally give precedence to the active aspect of human nature. More invokes “Perpetual Progress” as a transhumanist tenet that “captures the way transhumanists challenge traditional assertions that we should leave human nature fundamentally unchanged in order to conform to ‘God’s will’ or to what is considered ‘natural’” (More 2009). Neither social institutions nor moral intuitions should be taken as reasons for not modifying human nature. Currently alien and even unimaginable forms of existence can all be stamped with the mark of humanity, or whatever it is that humanity will call itself in the transhuman and posthuman stages of its existence. The important point is that transhumanists consider some aspects of human nature to be of negative value and seek their elimination. Some transhumanists even cite an ethical duty to future generations of the species and hold that it is morally irresponsible not to alleviate suffering and death as much as possible for these future beings. But transhumanists do not seek only the alleviation of perceived lacks. They also aim for the expansion of human qualities and abilities and new levels of existence that are currently unavailable to humans. Bostrom (2001) speaks of new “modes of being” that cannot be imagined by current humans. Kurzweil holds that technology will allow us to map, extract and upload the patterns of energy that constitute our consciousnesses. Through this technique we will ultimately “transcend” the material nature of humanity: “We can ‘go beyond’ the ‘ordinary’ powers of the material world through the power of patterns ... It’s through the emergent powers of the pattern that we transcend. Since the material stuff of which we are made turns over quickly, it is the transcendent power of our patterns that persists” (Kurzweil 2005, 388). Despite this rather mystical language we can discern a concept of human nature not unlike the Marxian one. Human nature is not any set of limits, conditions or needs; rather, it is an evolving process that constantly breaks through perceived limits. Humans can perceive themselves in all kinds of alien objects and forms – humanity is “universal” in Marx’s sense. Kurzweil describes a transhumanist sense of human essence: “the essence of being human is not our limitations – although we do have many – it’s our ability to reach beyond our limitations” (Kurzweil 2005, 311). Mészáros echoes these sentiments in his reading of Marx: “Nothing is therefore ‘implanted in human nature.’ Human nature is not something fixed by nature, but, on the contrary, a ‘nature’ which is made by man in his acts of ‘self-transcendence’ as a natural being” (Mészáros 1970, 170). Humans are nature “coming out of itself” and transforming itself – a process. The transhumanist conception of human nature is also, like the Marxian conception, an open-ended one. Whether due to the unforeseeable ruptures with the past that the Singularity will produce, or more modestly, due to human beings’ abysmal track record at predicting the future, most transhumanists do not commit to hard and fast images of the future. Speaking as a hypothetical future self, Bostrom explains: “I can pass you no blueprint for Utopia, no timetable, no roadmap. All I can give you is my assurance that there is something here, the potential for a better life” (Bostrom 2010, 7). All that can be done is to fix what we know now is broken (e.g. short life spans, genetic disease) and envision, rationally, future possibilities. Despite frequent (and often understandable) accusations of utopianism, most transhumanists do not, in fact, aim for a technological heaven of perfection. While Kurzweil’s far-future projections do sometimes sound something like this, the practical import of the transhumanist project is about making human life better in ways that are possible and comprehensible to us now or in the near future. Thus Riccardo Campa holds that “only when a technology exists and is experimentally proved should it become part of immediate transhumanist policies and action programs aimed at obtaining their implementation and broad accessibility. Until then, it can only be a working hypothesis for scientists in their laboratories or of science fiction writers in their literary works” (Campa 2008). Projections should be recognized as being defeasible, though useful, ways for informing our current actions, which will undoubtedly lead to at least some unforeseeable consequences. The open-ended nature of human development means that qualitatively different forms of life lie in the future of our species. While the “meaning” of such a radically different life will no doubt be unlike that of our current lives, this is no call for alarm, transhumanists argue. It may not be possible to judge the “meaning” of transhuman or posthuman lives by the values we currently live by. As Bostrom holds: “Our own current mode of being … spans but a minute subspace of what is possible or permitted by the physical constraints of the universe … It is not farfetched to suppose that there are parts of this larger space that represent extremely valuable ways of living, relating, feeling, and thinking” (2001, 2). 3.3 We have seen that for both transhumanism and Marxism openness to redefinitions of the human are called for by human nature itself. The similarities are significant, but there is a striking difference between the two: sociality. Most transhumanist thought tends to place little emphasis on the social nature of the human – and this is where transhumanists should take a point from Marx. The transformation of the human seems to be regarded by most transhumanists as a process undergone by atomistic individuals who each exist in no more than a loose aggregate with others. Transformation is of the self, by the self, with social considerations tacked on afterwards – “technological self-transformation” (More 1993). While material conditions in the form of technological apparatuses are certainly an essential aspect of transhumanist revolution, the material aspects of social structures are not usually taken into account beyond assertions that the “freedom” of liberal democracy and/or capitalism provides optimal productivity. While Bostrom advocates equal or wide access to the trans and posthuman realm, he does not touch on the social hierarchy that underlies the current capitalist system and how it will impinge on such egalitarian access (Bostrom 2001, 7). Marx pointed out that in a capitalist society (and this applies now more than ever) individuals can be bestowed with formally equal rights while simultaneously being differentiated and stratified by the underlying economic structure (Marx 1978, 34). An impoverished fisherman in Newfoundland and a CEO of a multinational corporation formally have the same rights as citizens of Canada, yet it is practically true that the millionaire CEO is able to perform actions that the fisherman cannot, through the hierarchical powers inherent in the possession of the means of production.9 Now imagine that the fisherman and the CEO are both given, through an equal distribution of rights, radically extended lives. Would this in any way change the social asymmetry between them? It seems unlikely. The fisherman will still be dependent on dwindling fisheries for his livelihood while the CEO thrives on the extraction of surplus value. Technological developments occur in a society that has the power to determine to what end those technologies are used and to what extent their equal distribution benefits the transhumanist project. While some proposed technologies, such as molecular assemblers, do present possibilities of undermining or upsetting social structures, it is also possible that oppressive social structures will inhibit or corrupt the optimal utilization of new technologies. A recent (and depressing example) is the internet; the democratic potential of which is currently under sustained assault by governments and multinational corporations worldwide.10 There is also the suppression of the General Motors EV1 electric vehicle by a combination of corporate and governmental forces.11 Transhumanists should take note of Marx’s insistence on what is often recognized as the fundamental contradiction of capitalism, the contradiction between the forces of production and the social relations of production. Marx writes: At a certain stage of their development, the material productive forces of society come in conflict with the existing relations of production … with the property relations within which they have been at work hitherto. From forms of development of the productive forces these relations turn into their fetters. (Marx 1978, 4) The capitalist system of production’s sole aim is to extract ever greater surplus value from labor through the increasingly intense exploitation of workers, sophistication of machinery and lay-offs, but at a certain point, Marx holds, these techniques begin to turn back against production and inhibit it. A simple, abstract example: increasing productive efficiency through the use of the above-mentioned techniques means that more product is produced by less workers who receive less wages. Therefore there are less and/or poorer consumers to consume ever more product. With no one to buy up all of the product and thus produce a profit, the capitalist must develop his extraction of surplus value through the same techniques that further shrink the pool of potential consumers, producing a stagnant economy that is cured only when a new market is found or demand for the product resurfaces. The property relations of capitalism – the capitalist owns the means of production, while the worker owns only his labor power – become anti-productive once the productive forces are sufficiently developed. This ponderous method pays little heed to needs of the people in the society it exists within, operating solely by the capitalist directive of “maximizing shareholder profit,” to use contemporary terms. We are now well aware of stratagems such as planned obsolescence (automobiles) and novelty-mongering (Apple excels at this) that capitalist organizations deploy to keep consumption going. The question for transhumanists is whether they want revolutionarily life-changing technologies to be produced and distributed by the clumsy and brutal hand of capitalist production. Surely, we can only expect molecular assembling technology to come to the public, if it does, from the non-profit sector, because from a capitalist perspective, selling assemblers would be identical to selling off ownership of the means of production. In summary, transhumanists need to take into account the fact that, while technology does restructure society, the structures of society – which are social relations between humans – also influence the deployment of technologies. If the ultimate goal of transhumanism is the flourishing of the evolving being that is currently called “human,” current social relations between humans cannot be bracketed out. The “freedom” to compete and accumulate wealth under capitalism is not equivalent to the freedom to reach beyond limits for all individuals. From a Marxian angle: “What is to be avoided above all else is the re-establishing of ‘Society’ as an abstraction vis-à-vis the individual. The individual is the social being … Man’s individual life and social life are not different” (Marx 1978, 86). Society is an association of individuals, not just a neutral space in which technological development will bring about changes in the human condition. The transformation of the individual and the transformation of society are inseparable.

#### 4] Capitalism is lagging –

Cockshott 98 [Paul, 1998, Department of Computer Science, Strathclyde University, Glasgow, Scotland, “Application of Artificial Intelligence Techniques to Economic Planning”, *University of Strathclyde* //GBS Majeed & Jacobs]

Relevance of computer science Computation is always a physical process. It is always performed by real physical mechanisms. These may be humans, humans aided by pen and paper, humans aided by calculators or electronic computers. At some point in the future these may be replaced by other physical mechanisms, perhaps based on optics. Whatever the mechanism, it has an economic cost. Human statisticians must be paid, computers must be built. There exists a body of laws which describe the costs of computation (Kronso 1987). The investigation of these laws is the task of computer science. In conjunction with the disciplines of electronic engineering and software engineering, it develops practical techniques for the solution of large-scale computations. The computational feasibility of a problem depends upon the rate at which the number of elementary arithmetic operations required to solve it grows with the size of the problem. If we label the size of the problem N then the complexity of a problem is characterized by some function complexity = F(N) which defines the least upper bound of the number of elementary arithmetic steps required. Tractable problems should have polynomial complexity functions. For really large N it is desirable to have a function of linear or log.linear complexity. These costs are conventionally expressed in terms of time. They may alternatively be mapped into costs in terms of space. By physical replication of components it is often possible to reduce the time taken to perform a computation, but the product of time by space occupied tends to be invariant for a given algorithmic technique and a given problem. This has obvious economic implications. The time and space abstractions of complexity theory translate into real economic costs. A computation is not worth doing if the answer arrives too late to do anything about it. If the cost of the computer required to solve a problem is greater than the savings to be made from solving it, it is better not to try. A large number of problems may be viewed from the standpoint of computation. We can for instance consider the operation of a market economy as a computational process. Loosely speaking we would describe the ’problem’ as being defined by the available physical resources and the demand schedules of the consumers. The objective of the calculation would be to ’arrive at a set of prices and a distribution of resources that optimally met the demand schedules. We are justified in thinking of this as a computational process because of a very powerful theorem of computer science that any finite physical process may be viewed as a computation and simulated on a computer (Deutsch 1985) with an appropriate program. A market economy is a rather slow computer since the basic steps of information transformation (price changes) only come about by the intermediary of changes in the physical volume of outputs. The elementary steps in the computation may take months or years, during which the availability of resources and demand schedules change. As a result the computation does not terminate. A planning bureau in a centrally controlled economy is more obviously a computational process. In this case the computation is not tied to alterations in the volume of physical output but proceeds either through the exchange of draft plan proposals between economists (Kornai 1975) or through the execution of programs on the planning bureau’s computers. In currently existing planning bureaus a considerable part of the process is still human mediated, which slows down the computational cycle. It may be the case that the speed to compute a plan in this way will actually be slower than the relaxation time of a market. Computer technology has delivered very big increases in productivity over the last forty years. The speed difference between hand calculation and doing the same thing on the fastest modern computer is about 10 to the power of 11. No other technology has achieved increases remotely like this. This raises the possibility that an entirely automatic computer program could perform the computations necessary for the control and balancing of production far faster than either a market or a planning bureau. To demonstrate that this is feasible we have to show that the problem of plan allocation can be cast in a form that is amenable to computer solution and that the complexity function of this computation has a time/space product that is economically acceptable. Limits to the formalism of linear programming Kantorovich demonstrated that the plan problem as formalized by him was logically soluble using linear programming techniques. Although it is logically possible to compute the correct allocation of resources to industries by these techniques, their practical application is hindered by several factors. Among these are the lack of data or poor quality of data available to the planning authorities in socialist economies and the technical backwardness of their computing machines. More significant is the question of computational complexity. Nove emphasises the scale of the problem,saying that there are 12 million distinct products in the Soviet Economy. He quotes a Soviet Economist as saying that it would take the whole population of the world millions of years just to solve the equations required for the plan of the Ukraine. The cost ofsolving linear programming problems grows non-linearly with the number of industries considered. Just to store the technical coefficients as an input/output matrix for the USSR economy would take around 1000000000000000 bytes of computer memory. At current prices of around $1000 per million bytes, this means the computer would cost upwards of 100 billion dollars. This alone would rule out applying a linear program to the whole economy even before we consider the running time of the program. To be acceptable the computation period should not exceed a few months, otherwise decisions arrive too late. Ideally we would like answers the same day. The cost of the computers and communications networks needed for the process should be less than the existing computing budget of an advanced economy, so that the computational tail does not wag the economic dog. We next argue that the problem of creating a balanced plan is order NlogN and computationally tractable provided that it is cast in terms of a different optimization model. Representing the problem The approach is to construct an internal computer model of the complete production structure of the economy and of the desired pattern of output. A form of search algorithm is then undertaken to discover a pattern of resource allocation that is close to optimal. It only gets close to optimal since the type of search procedure used is an iterative optimization which is terminated once an acceptable level of performance is achieved. The production structure of an economy is conventionally represented as an Input/Output matrix from a computational viewpoint. The memory storage requirement of a matrix grows as N 2 and the time order of matrix operations is greater than linear. Advantage is taken of the fact that real input/output matrices will, if expressed in natural rather than value units, be sparse. This allows the problem to be remodeled. Assume that there exists an enumerated type PRODUCT in our computational model of the economy such that the range of values of the type corresponds to the range of real products in the economy. An implementation of the type might be the bar-code number associated with each product. The other types used in the model are STOCKS, FLOWS, TECHNOLOGIES, and INDUSTRIES. A STOCK is defined to be an ordered pair of type (integer, PRODUCT) defining a number of units of a product. A FLOW is also of type (integer, PRODUCT) but is defined to be of dimension d dt (STOCK) By convention we define the consumption of a product to be a negative flow and the production of a product to be a positive flow (having negative and positive valued integer parts, respectively). A TECHNOLOGY is defined to be a function of type (\*STOCK → \*FLOW). That is to say it maps a set of stocks to a set of flows. (In what follows the notation \*X will mean the type of a set of X.) The interpretation of this is that the technology will allow a production process to take place such that: a given set of stocks will cause a net consumption of some products and a net production of others. Specifically, we assume that to generate a given net output, stocks of inputs must be combined in fixed proportions. So that: STOCKj = Icj Where I is the intensity with which a technology operates, cj is a constant, and STOCKj is the minimum stock of input j needed to attain this intensity. It is assumed that the flows induced by the technology will be of the form: FLOWj = fjI where the f are constants. An INDUSTRY is characterized by the combination of a set of stocks with a technology, hence (\*STOCK, TECHNOLOGY).1 The industry’s dynamic behaviour is characterized by the application of the technology function to its stocks. The above representation of the problem has the great advantage over linear programming approaches that it involves no matrices. In practice the matrix of technical coefficients of the economy would be very sparse. By using a set representation, the same information can be encoded much more efficiently. Using a suitable compact set representation the store required will grow proportionally to the product of the number of types of goods times the number of direct inputs that go into each distinct good. Because the mean number of direct inputs to a product is likely to be hundreds not millions, the memory costs for a representation of an economy are reduced by several orders of magnitude. A computer of the appropriate size would be expected to cost a few million dollars rather than hundreds of billions of dollars. The plan problem The plan problem can be defined as follows: given a set of stocks that exist at the current time period, and given a desired pattern of consumption of consumer goods, and a pre-given set of technologies, find the industrial structure that best meets this. This involves deciding how to allocate the aggregate stock of means of production between all of the industries. This can be solved by using techniques borrowed Irom artificial intelligence. Welfare economics is dependent upon the assumption that consumers are capable of chosing an optimal consumption pattern subject to certain constraints. This is a particular representation within the domain of economics of the ability of neural systems-human brains-to perform constraint satisfaction computations. Humans carry out constraint satisfaction computations all the time with our most basic physical movements. When we walk across the room and pick something up, our brain has solved an enormously complex constrained cost minimization function that has as its parameters all sorts of information about the degrees of freedom of our joints, the lengths of our bones, the impossibility of walking through tables, the fact that energy consumption is minimized by walking on our feet rather than our knees etc. We are unaware of them because trial and error during infancy specialized our brains for this sort of calculation. Economic planning is a problem of constraint satisfaction. Neural systems are consumately effective at constraint satisfaction, so it is beneficial to apply what has been learned through the study of neural networks to this area. Neural nets can be thought of as collections of entities with local interactions. The same can be thought of industries. An industry interacts with its immediate suppliers and customers. A neurone interacts with the other neurones that supply it with input signals and in turn drives output signals to other neurones. The intensity with which an industry is operated can be modeled by the frequency with which a neurone fires. A real neural analogue computer might have a neurone to represent each industry and would be set up with appropriate weights on its synapses to represent the strength of its coupling to other industries. The system is then presented with externalstimuli representing the desired pattern of output and the available inputs and is ’trained’ to select a pattern of industry activation that meets these constraints. In practice we would simulate the neural analogue computer on one or more digital computers. We end up with a digital computer simulating a neural computer simulating the total production function of a whole economy. But the principle of training with positive and negative reinforcement remains. In order to achieve this we introduce function which we term a Harmony function. This is loosely based upon the notion of Harmony used in the literature on neural nets (Smolensky 1986). The notion behind it is that Harmony is a real-valued function that measures how closely the net output of the economy corresponds with the goal. The function TotalHarmony(output,goal) where out put,goal : ∗FLOW may be evaluated by summing the contributions to TotalHarmony from each product. We define the function PartialHarmony(p) where p : PRODUCT to take on the value 0 when the output of a product exactly corresponds to the goal; it becomes steeply negative as output falls below the goal and becomes slightly positive when output exceeds the goal. This corresponds to the notion that shortfalls are more important than surpluses. A possible form of the partial harmony function would be: PartialHarmony(p) = H (scale(out put(p),goal(p))) (1) Where the scale function is of the form: scale(o,g) = o−g g (2) and the function H takes the form: H(x) = 1 2 if x > 0 −x 2 if x ≤ 0 (3) Since this function has a downwardssloping first derivative it mimicsthe economists’ notion of diminishing marginal utility. The partial harmony function depends upon relatively local information: the computed supply and demand for the product of an individual industry. This makes it suitable for use in a neural-motivated model. Given the partial harmony function we can construct a total harmony function: TotalHarmony = Σp PartialHarmony(p) (4) We redefine the problem as that of finding an algorithm that will adjust the distribution of stocks between industries so as to maximize harmony. The algorithm We start off with a random distribution of stocks between all industries, subject only to the constraint that stocks of a product are only allocated to those industries that use it as an input. 1. Find the rate-limiting factors For each industry determine the product for which the input stock acts as a rate limiting factor. Assume that the production function for the industry in question requires that the inputs must be combined in fixed proportions. This step will be of order k0NM where N is the number of industries and Mis the mean number of inputs per industry. 2. Remove non-critical resources If we have determined the critical resource for a production process and if we have a linear production function we can determine the stock of each other product that is required to optimally match the stock of the current critical resource. This is again subject to the assumption that the inputs must be combined in fixed proportions. We call this the balancing stock. Given the balancing stock of each non-critical input we can deduct any excess stocks and assign them to a global reserve. This step will again be of time order k1NM This step does not reduce net production as the resources moved to the central reserve are defined to be non-essential. In consequence, total harmony is not reduced by this step. 3. Compute partial harmonies Evaluate the partial harmony of each product. This involves calculating the net production of each product, comparing it with the goal and applying the harmony function. If this is done by iterating through each industry and evaluating the product flow contributed by that industry the time order of this will be k2NM +hN where h is the cost of applying the partial harmony function to a single product. 4. Compute mean harmony Given the partial harmonies, the mean and total harmony can then be computed. This will be of order N. 5. Sort in order of harmony We assume that there is only one industry acting as a net producer of each product. The harmony function originally applies to products; we now associate each industry with the partial harmony of its product. This enables us to order the industries in terms of ascending harmony. As a sorting operation this will be of complexity Nlog(N). 6. Reallocate reserves The stocks in the global pool are reallocated to industries starting with those industries that are least harmonious. (Note that these are purely notional transfers performed on the representation of the economy in the computer; no real transfers occur until the whole computation has terminated.) For each of these industries we calculate the additional stocks required to bring the industry up to mean harmony and allocate these to it from the global pool. The time order of this stage will be k3NMp where p is the proportion of industries that can have this done to them before stocks run out. As each industry has resources allocated to it, it is moved into the appropriate position in the list of industries and the mean harmony is re-evaluated. The cost of this operation will be of order pN log(N). 7. Reduce harmony peaks Up to this point all steps have tended to conserve or increase harmony. This is because they all tend to maintain or increase total production. We now have to alter the composition of production towards the most harmonious overall structure. This involves reassigning resources from those industries with the highest harmony to those with the lowest. Since the derivative of our harmony function dH decreases throughout its range, the system is characterized by diminishing marginal harmony. In consequence, total harmony can in some circumstances be increased by moving resources from the production of products with above-average harmony to those with below-average harmony. Our next step is to transfer resources from the most harmonious to the least harmonious branches of production. The set of products that are of above-average harmony is identified, the outputs of the industries producing them are scaled down until they are producing at average harmony, and the resourcesreleased are allocated to the global reserve. The complexity of this operation is k4NMq where q is the proportion of products of above-average harmony. 8. Iterate steps 6 and 7 till increase in harmony is small The crucial point here is how often the process has to be iterated. The limit to the complexity of the whole operation will be: R(pN (k3M +log(N))+k4NMq) where R is the number of iterations required. If we assume that the number of products in an economy is of the order of a million then M may well be greater than log(N). If we assume that M is of the order of 100 then the number of steps for the balancing of a million-product economy would be of the order of Rk5108 For an optimized program we might estimate the number of steps to be between 10 billion and 100 billion. Given that the fastest current computers operate at several billion operations per second (Frenkel 1986), this seems to be well within the bounds of feasible computation. Experimental verification The algorithm was programmed in the C programming language and a series of experimental runs made with simulated economies. The inputs to the program were: (1) a set of N technologies, (2) a set of target outputs for each product, (3) a set of stocks of means of production. The inputs were prepared by another program that ensured that the technologies were feasible, i.e. that the Sraffaian (Sraffa 1960) basic sector was capable of producing a surplus product, and that sufficient stocks of means of production were provided to meet the goals. The particular details of the technologies, targets, and stocks were, subject to these constraints, produced by a random-number generator. It was observed that the algorithm as given above did redistribute the stocks between industries in order to equalize harmony levels between industries. However it was found that industries converged upon a mean level of harmony that still left unused stocks of resources. There seem to be two alternative interpretations of this tendency to leave excess stocks. One possibility is that the system gets trapped in a local maximum of harmony that is below the global optimum such that no small variation in resource allocation would allow the system to escape from this local maximum. Alternatively, the fault may lie with the algorithm having an excessive tendency to converge towards the current mean harmony level. The problem of local maxima is also encountered in neural net simulations and it is avoided by using the technique of simulated annealing (Kirkpatrick et al 1983). In that case, thermal noise is added to ensure that the system moves towards a global maximum of harmony. The algorithm was thus modified to incorporate simulated annealing. In steps 6 and 7 a target output is computed for each industry such that production at this level would result in the industry being at mean ’harmony’: targeti = H(meanharmony) (5) The target is computed using the inverse harmony function H’ for the industry concerned. In order to overcome the strong convergence on the mean and the possibility of local maxima induced by this formula, an amplification a and a random noise variable n were added so that the output level was biased upwards: targeti = (1+n+a)H(meanharmony) (6) This also should allow for the system to escape local maxima. With each successive iteration the bias a and the noise variable n were reduced, allowing the system to go through two phases. In the first phase the target is dominated by the amplification bias, and all industries increase their outputs until resource constraints inhibit this. During the cooling phase the amplification bias tends towards zero and resources are gradually redistributed between industries. Monte Carlo type tests were performed on three versions of the algorithm: version 1 did not use amplification or thermal noise, version 2 used amplification alone, version 3 used both amplification and noise. A total of 49 runs of each the three algorithms were made. In all 49 runs the number of industries, the output goals, the technology, and the available stocks of resources were held constant. Each run used a different initial allocation of these resources between industries. For each of these initial allocation patterns the three versions of the algorithm attempted to find a maximally harmonious final resource allocation. The mean and standard deviations of the harmonies were then recorded for each algorithm on each run (Cottrell 1989). The results are summarized in Table 1. These seem to show that there is a statistically significant difference between version 1 and versions 2 and 3. The 95% confidence intervals for mean harmony are non-overlapping. On the other hand, there is not a significant difference between versions 2 and 3. Although the average mean harmony is a little higher when thermal noise is added to amplification, the 95% intervals for the populations are substantially overlapping. This implies that we should fail to reject the null hypothesis of equality between the two population means. The conclusion is that the addition of thermal noise is not worthwhile Algorithm Ver.sion 1 Version 2 Version 3 Average mean harmony -0..9473 1.3131 1.3180 Standard error 0..0012 0.0408 0.0406 Top of 95% confidence interval -0..9498 1.2314 1.2367 Bottom of 95% confidence interval 0..9448 1.3948 1.3994 Verifying that solution is correct Does the algorithm return the same solution as would have been arrived at by analytic means? In order to determine this, it was set the problem of computing the maximal harmony resource allocation for a system for which there was a known analytic solution. The approach was to define a set of goals and a set of technologiesto achieve these goals, and then to analytically determine the set of resources that were just sufficient to meet these goals with the given technologies. Let F be the input output flow matrix, then the net production flow matrix P is defined by P = (I −F) Now let the matrix of capital stocks required to sustain one unit of production for each industry be denoted by C and the goal vector by g. We can obtain the vector of stocks s just sufficient to meet the goals from the equation: s = C·(P −1 · g) If this quantity of stocks is harmoniously allocated between industries then the mean harmony of the system should be zero. This follows from the definition of harmony, which states that it is zero when outputs exactly equal goals. When the planbalancing algorithm was presented with a collection of industries whose total stocks had been calculated in this way, it terminated with a mean harmony of -0.0089. Given that the analytic solution assumed a real-valued stock vector which was rounded down to integer form for the plan-balancing algorithm, this was taken as evidence that the solution produced was correct to within rounding errors. Chart, line chart

Description automatically generatedChart, line chart

Description automatically generatedExperimentally determined time order Test runs were done with various numbers of industries. At the lower limit the number of industries was 30, at the upper limit 3750. In Fig. 1 two plots are shown of the computation time against number of industries for systems with M = 13 and M = 25, respectively. It will be observed that the run times are approximately a linear function of the number of industries. In general it was found that systems with large M converged after slightly fewer iterations than systems with small M and that for a given value of M the number of iterations was relatively independent of N. Figure 2 shows the evolution of mean harmony with successive iterations. The two phase development: rapid expansion followed by equilibration can be clearly seen. Conclusion The experimental results confirm the initial complexity analysis of the algorithm. The computer used for the computation had a floating-point arithmetic performance of less than 1 million operations per second. It was able to handle a system of 3705 industries in just over 320 seconds. It seems reasonable to project a similar compute time for balancing a plan of an entire economy on a modern super-computer. Nove gives an estimate of 12 million distinct products in the economy of one of the super-powers. This is an increase in the scale of the problem of about 3 orders of magnitude as compared to the experiment. The latest supercomputers have a throughput of several billion operations per second. This is again a 3-orders of magnitude improvement. Because 12 the algorithm depends upon local information, it should be suitable for multiprocessors. This implies that plan balancing in natural units is approaching the limits of what can be practically computed. Since computer technology advances quickly, what is at present marginally possible will soon be routinely possible. Such computations would only be as valid as the data available. To work they would presuppose the existence of an automatic data collection network, which relayed up-to-date information on partial production functions to the computer that performed the optimizations. We have argued elsewhere (Cockshott and Cottrell 1989) that this is well within the capabilities of current microcomputer and telecoms technology. We conclude that automated resource allocation by computer constitutes a third economic alternative to market allocation or bureaucratic allocation.

### Part 5 is Preempts

#### Impact Framing – Revolutionary Suicide is the risk we must take to abolish Racial Capitalism – there is no damnation worse than the current system.

Pinkard 13 [2013, Lynice Pinkard, “Revolutionary Suicide: Risking Everything to Transform Society and Live Fully”, Tikkun 2013 Volume 28, Number 4: 31-41, http://tikkun.dukejournals.org/content/28/4/31.full]

I’d like to present an alternative to conventional identity politics, one that requires that we understand the way that capitalism itself has grown out of a very particular kind of identity politics — white supremacy — aimed at securing “special benefits” for one group of people. It is not sufficient to speak only of identities of race, class, and gender. I believe we must also speak of identities in relation to domination. To what extent does any one of us identify with the forces of domination and participate in relations that reinforce that domination and the exploitation that goes with it? In what ways and to what extent are we wedded to our own upward mobility, financial security, good reputation, and ability to “win friends and influence people” in positions of power? Or conversely, do we identify (not wish to identify or pretend to identify but actually identify by putting our lives on the line) with efforts to reverse patterns of domination, empower people on the margins (even when we are not on the margins ourselves), and seek healthy, sustainable relations? When we consider our identities in relation to domination, we realize the manifold ways in which we have structured our lives and desires in support of the very economic and social system that is dominating us. To shake free of this cycle, we need to embrace a radical break from business as usual. We need to commit revolutionary suicide. By this I mean not the killing of our bodies but the destruction of our attachments to security, status, wealth, and power. These attachments prevent us from becoming spiritually and politically alive. They prevent us from changing the violent structure of the society in which we live. Revolutionary suicide means living out our commitments, even when that means risking death. When Huey Percy Newton, the cofounder of the Black Panther Party, called us to “revolutionary suicide,” it appears that he was making the same appeal as Jesus of Nazareth, who admonished, “Those who seek to save their lives will lose them, and those who lose their lives for the sake of [the planet] will save them.” Essentially, both movement founders are saying the same thing. Salvation is not an individual matter. It entails saving, delivering, rescuing an entire civilization. This cannot be just another day at the bargain counter. The salvation of an entire planet requires a total risk of everything — of you, of me, of unyielding people everywhere, for all time. This is what revolutionary suicide is. The cost of revolutionary change is people’s willingness to pay with their own lives. This is what Rachel Corrie knew when she, determined to prevent a Palestinian home in Rafah from being demolished, refused to move and was killed by an Israeli army bulldozer in the Gaza Strip. This is what Daniel Ellsberg knew when he made public the Pentagon Papers. It’s what Oscar Schindler knew when he rescued over 1,100 Jews from Nazi concentration camps, what subversive Hutus knew when they risked their lives to rescue Tutsis in the Rwandan genocide. This call may sound extreme at first, but an unflinching look at the structure of our society reveals why nothing less is enough. Before returning to the question of revolutionary suicide and what it might mean in each of our lives, let’s look at what we’re up against.

#### Process Counterplan Framing – debates over institutional minutia siphon energy away from social transformation – distinctions in central tenants and epistemology should come first

**Bhattacharyya 13**, Race and Ethnicity Prof at Aston University (Gargi, How can we live with ourselves? Universities and the attempt to reconcile learning and doing, Ethnic and Racial Studies, Vol. 36, No. 9, 1411-1428)

In Britain also there has been a move away from radical imagination in the politics of race, towards either highly institutionalized activity designed to measure and correct differential outcomes, or to ethnic particularity that challenges racism faced by a particular group but rarely links this activity to other struggles or a vision of an alternative society. However necessary these forms of organization may be because institutional outcomes continue to harden inequality between groups and mobilization needs to take place where people are, building on the affiliations that make sense to them the loss of a larger vision and set of aspirations diminishes what anti-racist politics can be. Kelly (2002, p. xii) goes on to specify the loss that arises from too exclusive a focus on matters of institutional detail or immediate politicking: Without new visions we don’t know what to build, only what to knock down. We not only end up confused, rudderless, and cynical, but we forget that making a revolution is not a series of clever maneuvers and tactics but a process that can and must transform us. This new revolutionary subject is unlikely to emerge from the mundane techniques of management that have come to typify ‘useful’ research in the field of racism. In response to the formulation of recent research funding in the UK, research in the field of race and racism that connects with ‘users’ has tended towards the technical. Much of this is shaped by the demand that research demonstrate its own ‘impact’, that is, shows its usefulness to an audience beyond academia, often before any findings are made and in order for time and money to be allocated.6 For the field of race and ethnic studies, this demand brings a model of knowledge as technique often management technique. Whether racism is seen to arise from communicational barriers between groups or from flawed institutional practices, the solution is presented as alternative practices do this and others will adapt their behaviour in these ways. If this were the extent of the imaginative failure, things would not be too bad. After all, universities rarely include the most exciting of ideas until the excitement can be rewritten as tradition. Sometimes banishment from the academy can help to get a different and more energetic audience for ideas that aspire to change our world. However, the politics of race seems to be institutionalized in an even more tightly confined logic in the spaces outside the academy. There may be a widespread recognition that racism demands an institutional response, but this is ripped away from any larger political narrative altogether. As a result, the attempts by scholars to address a public also tend to be limited by the narrow demands of such technical or legalistic approaches to what anti-racism can and should be. There is a dilemma here. For scholars who wish to connect with so called practitioners and who, perhaps, consider this world of equalities practice as their ‘public’ research is likely to become focused around these questions of technical organization. Of course, many of us still seek to document and explore the complexity of racism and its impact in the world but the focus for this endeavour becomes segmented by institutional focus and, often, a rush to make ‘recommendations’. Access to research funding in Britain, increasingly the only route to creating space for scholarly work, demands that research delivers this ‘impact’ of immediate and usable advice. At the same time, the ‘public’ of practitioners a group here that is overwhelmingly concentrated in organizations tasked with delivering services to diverse populations, whether through statutory services or the third sector appear to understand the role of the intellectual only as this kind of technical adviser.7 Useful research becomes only this research that can enable alternative and potentially more effective operation of bureaucratic practices of one kind or another. This framing of anti-racist research transforms the kind of politics that can be imagined for this intellectual endeavour. This is anti-racism as a matter of organizational adaptation, not any wider social transformation. Perhaps some believe that transformation occurs through the collective impact of these many small organizational changes that has certainly been the unspoken implication of anti- racist work since the Lawrence Enquiry but, whatever the benefits of improved institutional practices, if these in fact have been achieved, this approach abandons any sense of political movement. We may be producing work that connects with a public, but the aspirations of both scholars and public seem less than they were.

#### Governance is good and inevitable.

Renaux 19 [Valarie, 5/29/19, Philosophy. Writing on Marxism, eliminativism in philosophy of mind and metaethics, suffering(-focused ethics), and philosophical pessimism, “Marxism and the State”, <https://medium.com/@valarierenaux/marxism-and-the-state-eeb6ceca4515> //GBS Majeed & Jacobs]

Here, perhaps, is a manifestation of one of the foundational flaws in anarchist theory: its veneration of human nature (as it understands it, at least). Bakunin claims that “human nature” makes corruption and counterrevolutionary, anti-proletarian actions inevitable once a section of the working class seizes power. Why does he say this? What proof does he have? In a word, none. ‘Human nature’ as it is predominantly understood is nothing more than our proclivity towards certain actions within specific material contexts, which are subject to change — and thus so are the proclivities. Even if it could be established that capitalist society generates some kind of fundamental proclivity among the working class and even humanity as a whole to act out of greed, selfishness and short-termism (which is practically speaking impossible to prove anyway), it does not follow that this is inherent and unavoidable in the human animal itself as some kind of abstract template for our actions. By elevating the human creature itself to the level of pseudoreligious ideology, anarchism practises exactly the same form of ideologising that the bourgeoisie and the feudal and even patrician classes before them have long done. Marxism rightfully does not concern itself with such sophistry, with such meaningless protestations against placing power in the hands of the working class and its party. “During its lifetime the working class state will continually evolve up to the point that it finally withers away: the nature of social organisation, of human association, will radically change according to the development of technology and the forces of production, and man’s nature will be equally subject to deep alterations always moving away more and more from the beast of burden and slave which he was.”²⁴ This links closely with the final problem with Bakunin and the anarchists’ position on the state that we shall address here. Bakunin describes his fictitious once-proletarians as “look[ing] down” on the workers from the “governing heights of the State.” What does this mean? It means, in one clear sense, that Bakunin sees the state as something distinct from society, something separate from and alien to it, something parasitical and detached from the productive elements of society. But never has or will the state be something “imposed on society from without,”²⁵ something that stands above class distinctions, or gendered divisions in labour, or religious and secular ideology alike, or indeed anything else. The state is not separate from society; it is society, it is the inevitable and necessary product of a society as it exists at certain stages of historical-economic development, and without it, the society would be reduced to utter barbarism, open, ubiquitous kinetic violence, a marked decline in living standards for all, both relative and actual, a severe degradation in the quality of goods, and so on. In a word, you would have social and even civilisational collapse. This is because ‘society’ is not one harmonious thing; rather, it is the aggregate of all human social and economic relations, and these humans and their socioeconomic situations are anything but uniform. Without the state, with its monopoly on violence and its often dominant role in the cultural narrative, these contradictions — irreconcilable contradictions — would be acted out through direct, physical struggle. There are but two outcomes to such a thing: either a state will be formed anew, but only after an extended period of acute crisis dealing devastating damage to all, and so the destruction of the state (and more precisely the failure to build a new state to replace it) was not only pointless but entirely undesirable to the society, or, worse still, the construction of a new state, for whatever reason, fails, and the population collapses into a regressed state of primitive-communism. History would have been reset. There does not exist some dichotomy of society and state, only the existence of a society with a state, and if a society has a state, it needs a state, and simply seeking its destruction is entirely misguided and naïve, springing from a fundamental misconstruing of what the state is, what society is, and what one’s own material interests are. In a word, it is idealism — it is utopianism. It should be evident from the rest of this essay that the state is not something that can be simply dismantled and destroyed by force and violence; it can only “wither away” when the material conditions are right. To attempt to act outside of history as anarchism does is dangerous to all, never mind arrogant and individualist. It is a position in absolute opposition to the interests of the workers. General remarks on the nature of class dictatorship Mao Zedong famously taught that “[p]olitical power grows out of the barrel of a gun.”²⁶ Truly there is no more succinct and accurate description of politics — which is, at its core, the systematised control and regulation of violence — than this. Anything that suggests otherwise is an obfuscation; such obfuscations serve an agenda, and all but always one of the ruling class. The class destined to vanquish class society itself has no need of the propaganda and sophistry of traditional class rule; we can, and should, state in no uncertain terms that the only rational expression of our political interests is a class dictatorship won and maintained by force of arms for the exclusive benefit of our economic class at the expense of all others. The proletarian state represents, for the first time in history, the material and thus socio-political interests of the vast majority of the people. From this simple fact an equally simple conclusion can be drawn: namely, that both when the working class is barred from power and when it holds it, it is only benefited by a frank and open understanding of the thoroughly class- and violence-based nature of state power. In the former situation, the proletarian is aware that society is organised upon his exploitation and that he has no material interest whatsoever in the preservation of the status quo, while in the latter, he sees that he should not be afraid of ‘tyranny,’ that the bourgeoisie are justly and necessarily without power and rights, and that should they be granted them, they will use them to undermine and overthrow the régime and institute terror of a previously unprecedented scale and harshness. In short, the stripping away of the pretensions and illusions of the state represent, and reinforce, heightened class consciousness. In terms of our interests, power is best manifested naked, and as proletarians, we have, unequivocally, a side on which to fall in the class struggle. As such, our political goals must include as a matter of necessity the seizure of state power. The lessons of the Paris Commune and of all revolutionary ventures throughout history is that the revolution that does not seize state power is thwarted. Never, in all human history, has this truth been countered. What’s more, the nature of the dictatorship of the proletariat is that it is exactly that: a dictatorship. All true communists know this to be so, and do not fear, but relish the opportunities that lie in controlling the state. The state is a tool — a weapon, and no weapon has morals in and of itself. Only when the sword is taken up and brandished in anger does it become an instrument of war and not simply a sliver of metal. The state is much the same. The anarchic view of the state is one of an enemy of ‘the people,’ one that is inherently undesirable and wretched, whoever straddles it. Marxism is not so naïve, not so utopian: the state serves her masters, and serves them well; when the working class reigns, the state delivers its Terror upon the counterrevolution and with it the socialist society can progress, in time, to a communist one. Without it, the working class movement is simply destroyed the instance the bourgeois reaction can organise itself anew. Marxism is scientific socialism; it is not utopianism. It would be false and misleading to claim that Marxism has ends; rather, it merely has analyses and observations. In their scientific study of the march of history and the intricacies of the capitalistic mode of production, the Marxists have discovered and laid out the series of progressions and laws that, hopefully, this essay has allowed the reader to understand, if only in brief: that “the history of all hitherto existing society is the history of class struggle,”²⁷ that the working class must smash the existing bourgeois state, that the working class must create its own state to serve its own needs, and that this state must inevitably be the last stage of the state in all history. Marxism does not talk of that which is impossible; only that which is possible. The triumphs of the working class movement during the twentieth century prove this to be so, but much that was won has since been lost. As the Great Acceleration of the Anthropocene deepens, the need to place power in the hands of the workers intensifies with every passing week towards a singularly apocalyptic zenith. In the past, Marxists have rightly given the slogan socialism or barbarism?, but today, that is no longer sufficient: today, it it must be socialism or extinction? In matters of war and revolution, liberalism’s façades are quick to fall from the eyes of the class conscious worker. The premier and central issue of working class politics must be the conquest of state power. Only then can we change the world.