# Cybernetics

#### The erosion of the distinction between human and machine, between knowledge and data, has already occurred. This is the thesis of Cybernetics- our world has become an amalgamation of technology and humanity. We leave behind humanity in pursuit of technology

Kroker 14

[Arthur, running out of jokes here. 2014. “Exits to the Posthuman Future.”] pat

Digital cosmology? Its ontology is epigenesist, the belief that digital organisms proliferate by the new appearance of code structures and networking functions. Always disloyal to evolutionary logic, software code only recognizes digital life as a random struggle between digital design – repetitive patterned instructions – and the wild side of ruptures, conjurations, and intermediations. There's no real difference between the two sides. They are only apparent opposites. This is the story of identity and difference: patterns and randomness, a strict tutelary of programmed instructions and the outlaw will to disturb the codes, disobey instructions, take programs to their wild side, surveillance to the extremes of micro-granular detail, and the persistent human desire to wetware machines. Coming to maturity under the sign of the terrorism of intelligibility, the real seduction of code lies in its desire in the end to be unintelligible, untraceable, unknowable, not capable of being archived. That's why the story of digital complexity today is captured beautifully by the language of clouds, storm vectors of codes moving at high velocity across the electronic sky, data hurricanes, BitStorm tornadoes, all those drifting clouds of networked subjectivity circulating through social networking technologies with their unexpected new structures and functions of FaceBook, YouTube, Twitter, and iChat. Like the collective authorship over many centuries of the Book of Genesis, the Book of Digital Epigenesis also has its cosmologists now and into the future. For who can really anticipate what will happen in the time of digital epigenesis? Who can predict with any certainty what new structures and functions will emerge from this new story of creation from digital nothingness? In desperation, astrophysicists describe the situation as that of “punctuated catastrophe.” But we know better: digital epigenesis is the newest temporary solution to an ancient biblical riddle – creation out of nothingness – and to an equally ancient philosophical puzzle: the question of identity and difference. And not only that but digital cosmology also introduces in its wake a new theory of epistemology: epigenetics – the study of the neural mechanisms by which digital genes bring about their phenotypic effects. The earliest of the technological utopians, Marshall McLuhan, Wyndham Lewis, and Teilhard de Chardin, provided eloquent anticipatory warnings that the externalization of the human sensorium under the pressure of technological media of communication would enable the emergence of a digital nervous system. Since the mid-twentieth century, this haunting prophecy concerning the digital nervous system has remained a literary construct, a metaphor begging to be made operational. That's definitely no longer the case. Through a curious twist of fate, the great discourses of digitality and genomics shared historical periodicity because data is actually the genetic structure of the digital body – the global data genome. Like the seasons of life itself, data moves from plenitude to senescence, it also has dawns and twilights. The global data genome is a vastly improved nervous system since its neurological mechanisms can never be confused with the embedded mind as the locus of consciousness, but from its moment of inception are distributive, circulating, relational, complex. Seemingly always one step out of season with regimes of intelligibility, the very best of data has its own broken synapses, overloaded consciousness, flickering memory, and software glitches. When digitality and genomics merge in the form of the global digital genome, post-traumatic (data) stress disorder with all its traumas is finally realized as the animating principle of augmented reality. “Post-traumatic” because the abrupt shutting down of the human sensorium accompanied by the immersion of the human organism in the skin of data, this profound originary event, announcing the termination of the human species as we have known it with its privatized ego, localized consciousness, and radical separation of the senses; and the inception of something profoundly new, simultaneously ominous and exciting – the subject as an emergent ecology of biology/sociality/data – this awesome event announcing the eclipse of one (human) species-form and the immediate emergence of its networked successor has already occurred. McLuhan once claimed that the blast has already happened: we're floating in the debris from the breakup of the autonomous body, discrete ego, and embedded nervous system. Who was prepared for this? Who was ready for the immediate mutation eclipse of the species-form of the human into half flesh/half code? In this epochal shift, data itself suffers stress disorder as its primary trauma. It is not really so much that the new organism of half flesh/half code cannot tolerate the speed of technological acceleration. Liberated from the plodding world of materiality by networked regimes of relational processing and ubiquitous computing, the neural mechanisms of the human mind demonstrate unexpected plasticity and openness to heterogeneity. The evidence is all around us: brains sustaining physical injury that instantly reorganize the field of perception, artistic vision accelerating the speed of data, sci-fi literature overstimulating the nervous system of information, cinematic futurism that easily outruns the speed of technological change, a new aesthetics of perception that eagerly embraces the delirious simulacra of gaming. Everywhere the neural mechanisms of data flesh skip across liquid streams of information flows like flat-edged stones tossed on a lazy data summer afternoon. Every bit of media evidence, from television and radio through computing, cells, Blackberries, Twitters, and the virtual apparatus of augmented reality, suggests that the human brain has absorbed, easily and enthusiastically, its ablation into the nervous system of the fully externalized technological media of communication. The real challenge is data trauma, the fact that data cannot keep up, either metaphorically or materially, with the speed of perception. That is why data often resembles the conservative ressentiment of Wendy Brown's States of Injury, resentful, left behind, revenge-seeking. Data seeks the safety of digital purity; firewalling itself in the hygienic spaces of closed data dumps. In other instances, data become aggressive – it turns on its human companion species, taking cold comfort in the durational memory and identity triangulations so necessary to surveillance systems. Like the worst of the human species before it, data is capable of the ethics of Heidegger's “injurious neglect.” It too can sometimes only find expression in terms of a “malice of strife.” Born again in the baptistery of genomics, data is a fully completed nihilist, infected with the ressentiment of the human species that it was so eager to replace, the spearhead of a purely technical will – drifting, oscillating, wiping away the horizon, in its leading expression a software animation precisely because data is haunted by the trace of death. But of course the death of data is precisely why information culture can be so dynamic. It is the tangible scent of the necropolis in the data storm that makes information culture so deeply, so seductively charismatic. Bored with the logic of presence, the ablated neural mechanisms of the networked subject sift in deepest fascination through the debris of the human remains of the species – shards of memory, strands of forgotten codes, dead media, broken thoughts, book after book of fatally overcome faces. It is this hint of death that drives the necropolis of software. Feasting on the remains, the massive accumulation that is dead information is finally free to express itself as a pure technical will, and nothing besides. Literally, data today is a nervous breakthrough. Refusing stability, never stationary, data is condemned to a cycle of endless circulation. It has no destiny other than that of the pure will: augmented, streamed, mobilized, Facebooked, Twittered, iPodded, flickered, upgraded, downloaded, wide-screened, multitasked, and GPSed. Like all species before it, there will finally come a time when data will grow weary with itself and, as an exhausted nihilist, find pleasure only in making itself ill. My suspicion is that, in this time of accelerated data flows, the appearance of data as an exhausted nihilist is already upon us. In this age of exhausted data, everything counts, everything apps precisely because nothing now counts but the ersatz nothingness of data itself. Digital trauma.

#### Empirics Prove: A recent America-backed coup in Bolivia over lithium supplies is concrete evidence of Cybernetics’ grasp on our society

Conese 19 [Ignacio Conese, December 9 2019, "Was Bolivia's coup over lithium?”, TRTWorld, <https://www.trtworld.com/magazine/was-bolivia-s-coup-over-lithium-32033>] ZS

Many believe the recent ousting of Bolivian President Evo Morales is a consequence of his tight controls over the country's lithium resources. Living in exile in Mexico, former Bolivian president Evo Morales was recently asked in a televised interview about the reasons behind his ousting and the first thing he pointed out was lithium and the projects he pursued in an attempt to position Bolivia at the top of global energy transition. Bolivia is home to the world's largest lithium reserves. The soft metal is an essential component for the production of electric cars, smartphones and laptop batteries. While big Western businesses have been eyeing Bolivia's lithium mines for over a decade, the Morales-led government made sure that the so-called 'white gold' reserves remained out of bounds to outsiders and an exclusive property of the state. Two years after coming to power, he introduced strong licencing controls, making it difficult for big businesses to extract raw lithium at throwaway prices. "When Morales came to power in 2006, Frutcas, a peasants union from Potosi, presented the government a project to declare lithium a strategic resource allowing only state controlled exploitation," said Federico Nacif, a senior sociologist who coordinates a team at the National University of Quilmes in Buenos Aires, conducting research on lithium in Argentina, Chile and Bolivia. "Morales founded YLB [Bolivia’s national lithium firm] in 2008, developed and controlled every and any mining site. Lithium was declared a strategic resource and Bolivia started to pave a slow but sovereign process to enter the world market, not only as a resource provider, but as a producer of final stage products. “It's the global energy transition taking place in front of our eyes. And if we were to compare lithium with oil, Bolivia would be the new Saudi Arabia. But it's not." The tight government regulations prevented major transnational mining firms such as France's Eramet, America's FMC and South Korea's Posco from entering Bolivia's lithium market. They failed to negotiate with the Morales government, which refused to budge on its demand — that for the development of lithium, both national mining company Comibol and YLB have to be equal partners. Many mining firms eventually moved to Argentina. Bolivia's President Evo Morales tours a semi-industrial plant to produce potassium chloride, used to manufacture batteries based on lithium, after its opening ceremony at the Uyuni salt desert, outskirts of Llipi, Bolivia, Thursday, Aug. 9, 2012. The salt flats of Uyuni have triggered international interest among energy companies due to its lithium reserves. Bolivia's President Evo Morales tours a semi-industrial plant to produce potassium chloride, used to manufacture batteries based on lithium, after its opening ceremony at the Uyuni salt desert, outskirts of Llipi, Bolivia, Thursday, Aug. 9, 2012. The salt flats of Uyuni have triggered international interest among energy companies due to its lithium reserves. (AP) Morales managed to keep Bolivia's business elite and mining oligarchs at bay, thanks to the growing size of the country's economy. The Financial Times wrote in 2014 that Morales' mining policy has helped the country earn some economic dividends. “Proof of the success of Morales’s economic model is that since coming to power he has tripled the size of the economy while ramping up record foreign reserves.” But Morales always walked a tightrope. Local media criticised the president for being slow in "jumping onto the white gold rush". With the nationalisation of mining assets, Comcipo, a civic body in the country's mining hub Potosi, began mobilising against Morales as early as the state lithium projects began in 2008, by demanding royalties. By 2010, royalties in liberated mining markets such as Argentina and Chile had already started flushing into the coffers of civic bodies. But the delay in Bolivia due to government controls began to cause disappointment among many local businessmen and middle class professionals. Comcipo’s main advisor on lithium is Juan Carlos Zuleta, an economist with strong ties to the global lithium industry. He is also an advisor of the mining hedge fund Seeking Alpha and the Lithium Council of Chile. Zuleta has been a bitter critic of Morales. In the spring of 2019, a few months prior to Morales' ousting, Zuleta took aim at the embattled president when Bolivia signed a lithium deal with Germany's ACI Systems, a private company which develops lithium for industrial use. He said Morales was giving up Bolivia’s resources to Germany. Nacif, the sociologist, says Zuleta's criticism was out of step with reality. “Morales conducted hard negotiations with the Germans in order to develop a sovereign and strategic industry that would potentially play a major role in the global market," Nacif said. "No one gives up and transfers technology easily, it’s the hardest thing to achieve and develop. Bolivia’s lithium policy has been divergent, instead of convergent policy towards global powers and the role that’s been designated to South American countries as merely raw material providers.” Bolivia's deal with ACI Systems hit the snag as the people of the lithium-rich Potosi region took to the streets, demanding an increase in royalties from three percent to 11 percent. By early October, as the country prepared for the presidential election, the protests in Potosi began to threaten Morales' political standing. Marco Antonio Pumari, Comcipo’s leader, announced a civic strike and blockade of Potosi demanding the annulment of the agreement with ACL Systems. The strike turned violent with the police opening fire on protesters, killing at least five people in the first few days. The demonstrations eclipsed the presidential elections and continued for several days after their completion. The demand for new elections began gained momentum on the streets even though Morales had emerged as the winner with a staggering 48 percent of the vote share in Potosi alone. On November 2, the Morales-led government gave in to the public pressure, revoking the agreement with ACI System. They offered 'open negotiations' to Comcipo, hoping that the move would stop the strike and pacify protesters. Pumari, the civic body leader, demanded the resignation of Morales, setting it as a condition to discontinue the strike. By then, the coup had begun to unfold. On November 11, the head of Bolivia’s military, General Williams Kaliman, called on Evo Morales to resign from the presidency. A few hours later, Morales did just that. That night, far-right leader Luis Fernando Camacho, a leading force in anti-Morales agitation, entered the presidential palace along with Comcipo head Pumari. Escorted by the police, they took down the Whipala flag, which symbolises the Andean natives, and photographed themselves placing a bible over Bolivia’s national flag. A few hours later, Morales announced his resignation with a video streamed from the city of Cochabamba. After the coup, the stock value of America's automotive and electric car manufacturer Tesla rose astronomically. Tesla's production line is massively dependent on lithium. Almost a week after Morales resigned and fled to Mexico, Uruguay's ex-president Jose Mujica hinted at Bolivia's energy reserves, while sharing his views on the president's departure. "Bolivia is very rich, it harbours an estimated 70 percent of the raw material needed to make new batteries," Mujica said. "We all know that there is a global energy shift: I am not accusing anyone, because I have no proof, but I am just suspicious in light of history.”

#### Cybernetics ensures the production of catastrophe is maintained to enable new technological innovations. As technology ultimately fails to properly address existential crises, we enter a positive feedback loop of development in a futile effort to catch up with our problems

Duffield 19 [Mark Duffield is a Professor of Development Politics and Director of the Global Insecurities Centre @ the University of Bristol, “Post-Humanitarianism: Governing Precarity in the Digital World,” 2019, Polity Press]//thanks Townes

At the time of writing, there is a consensus among Western security specialists that the world has entered a period of uncertainty and political instability unprecedented in recent times. One such source is the latest Munich Security Report (MSR 2017) provocatively entitled ‘Post-truth, post-West, post-order?’. Intended for policy and security professionals, the Report is a digest of the latest international trends and events. Like a breathless messenger, it describes the different flags and factions of the illiberal barbarians now massing at the gates. In concert with a clutch of new books,1 it depicts a groundswell of populist and fundamentalist movements, laying claim to local or cultural authenticities, which are now challenging and pushing back cosmopolitan values and libertarian identities. Expected since the mid-1990s, it looks as if the ‘coming anarchy’ may now be arriving (Kaplan 1994). There are several factors, however, that give the present a new and distinct feel. Divisions and contradictions are appearing in the West. Random terrorism is becoming routine, while dissatisfaction is growing among those who feel left behind and abandoned. Apart from increasing security measures and orchestrating public displays of resilience, political elites are challenged for real answers. With Syria as a case in point, compared to the 1990s, Western states have also lost their interventionary nerve. Citizens of democracies believe less and less that their systems are able to deliver positive outcomes for them, and increasingly favour national solutions and closed borders over globalism and openness. Illiberal regimes, on the other hand, seem to be on solid footing and act with assertiveness, while the willingness and ability of Western democracies to shape international affairs and to defend the rules-based liberal order are declining (MSR 2017: 5). This book is not concerned with questioning whether this picture of international push-back and Western decline is accurate or not. That it exists and has credence is sufficient. Our point of departure is the stark contrast between this imaginary future–present and a different, earlier one – namely, how the international scene looked a mere five or six decades ago. Driven by frequently violent struggles for national liberation, decolonization and the dismantling of imperialism from below were in full swing. With its excess of youthful radicalism, for many commentators the 1960s were a volatile interregnum of emancipatory forces pushing towards world revolution (Mills 1960). Breaking with Victorian Marxism, the rash of anticolonial struggles ushered in a New Left convinced that the peasantry was now the true heir of this revolution. As the colonial order eroded, continuing privation and exploitation meant that it was the peasantry, unlike most industrial workers, that now had nothing to gain from compromise: ‘In China and Vietnam, in Cuba, Kenya and Algeria, in Brazil’s North-east and in the back-country of Angola, the peasantry has emerged as the decisive force in revolutionary struggles’ (Buchanan 1963: 11). Contrary to an earlier Eurocentric left orthodoxy, while a radicalized intelligentsia and worker vanguard could prime the revolutionary fuse in the industrial countries, it was an emergent Third World that would now ignite it (Marcuse 1967). Moreover, without the active alignment and international solidarity between these spatially separated forces and struggles, the chance of world revolution would be lost. Whether such views were realistic or delusional should not detract from the fact that they were real enough to mobilize people on an international scale. The contrast between a revolutionary, anti-racist future–present, where the international appeared as a space of political optimism and fraternity, and today’s more pessimistic vista of rupture and political failure is striking. This book is a preliminary attempt to try to understand this shift and assess what we may have lost and, for good or ill, what we have gained. Methodologically attentive to history, it addresses this question in relation to the changing understanding of the nature of humanitarian disaster. How disasters are understood and communicated shapes the nature of the global North–South interface (Chouliaraki 2013).2 Indeed, one could go further. Since the 1980s, disasters have become a new ontological force. From the crash of asteroids into a primeval Earth, disasters have been given a pivotal role in the evolution of life, in the development of creativity and, not least, as key punctuation marks in the emergence and spread of human society (Homer-Dixon 2007). This catastrophism has accompanied the rise to dominance of an ecology-based resilience thinking, with its signature view that ‘authentic’ life exists in the jouissance that lies on the edge of extinction. Resilience is a measure of the probability of escaping disaster through socializing the smart moves that drive developmental evolution (Holling 1973). Disasters are thus a potent bridging mechanism that connects humanitarian practice with wider ideological and societal change. These changes, moreover, help illuminate the move from optimism to political pessimism. This shift, it will be argued, is integral to the rise of post-humanitarianism. However, in making a link from disasters to these broader questions, two additional and accompanying registers or sets of differences are important. Over the period in question, there has been a spatial shift from ‘circulation’ to ‘connectivity’, together with an interrelated ontological, epistemological and methodological transition from deductive ‘knowledge’, framed by history and causation, to an increasing reliance on inductive mathematical ‘data’ and machine-thinking for sense-making. The way we know the world and understand what it means to be human has fundamentally changed (Chandler 2018). Rather than seeing the emergence of a new post-human essence, this book grounds these shifts and registers in the changing nature of capitalism. While corporations, governments and the academy celebrate the age of connectivity, and regard the sort of international foreboding described in the Munich Security Report as a separate issue, we are more open to the possibility of their causal correlation. This Introduction unpacks these registers and gives the reader an indication of the structure of the book.

#### Cybernetics and war are intrinsically tied, having developed around each other. Nukes were developed under a cybernetic influence and nuclear war is the inevitable result

Dyer-Witheford 19 [Nick Dyer-Witheford and Svitlana Matviyenko, 2019, "Cyberwar and Revolution," University of Minnesota Press, <https://www.upress.umn.edu/book-division/books/cyberwar-and-revolution>] ZS

That capital periodically renews itself with technological revolutions, machinic steroid injections that boost productivity, open markets, overcome tendencies to stagnation and declining profit rates, destroy old industries and create new ones, is an understanding shared by capitalist and communist theorists alike. Joseph Schumpeter’s (1942, 139) rewrite of Marx and Engels’s ([1848] 1964, 63) observations on the bourgeoisie’s compulsion to “constantly revolutionize the means of production” as a paean to capital’s “gales of creative destruction” exemplifies this concurrence. Capital comes into being as a socially radical force characterized by dramatic technological innovation and is then driven by competition between firms, and by those firms’ need to defeat and disempower labor, to incessantly update its machinic apparatus, a process that periodically rises to the level of vast systemic convulsion, as in the first and second industrial revolutions of the early and late nineteenth century, based on steam and electricity, respectively. In the 1970s, the accelerating adoption of computers and networks within advanced capital was recognized by Marxist theorists of the time as the “third industrial revolution” or the “microelectronics revolution” (Mandel 1975; Levidow and Young 1981). And just as previous industrial revolutions brought new iterations of industrial warfare, from dreadnoughts to tanks and aerial bombardment, so it is no surprise that the most recent of capital’s technological revolutions manifests eventually not just in the means of production but also in the means of destruction, making cyberwar the logical military outgrowth of what is referred to as “information capitalism,” “digital capitalism,” “cognitive capitalism,” or, indeed, “cybernetic capitalism” (Davis, Hirschl, and Stack 1997; Schiller 1999; Moulier-Boutang 2011; Robins and Webster 1988). However, to say just that cybernetic capitalism creates cyberwar—a commonplace— is too simple. For war comes first. In the majority of Marxist writing, capital’s constant renewal of the means of production is seen as arising from normal market processes, that is to say, the rivalry between capitalists seeking competitive advantage, albeit advantage that may be won in class war by technologically breaking the power of the workers. But for a smaller group of theorists, the link between war and innovation is more direct. Such a link is at least hinted at in Marx’s (1973, 49) cryptic reminder to himself in the Grundrisse notebooks: Notabene in regard to points to be mentioned here and not to be forgotten: (1) War developed earlier than peace; the way in which certain economic relations such as wage labour, machinery etc. develop earlier, owing to war and in the armies etc., than in the interior of bourgeois society. The relation of productive force and relations of exchange also especially vivid in the army. This suggestion has been expanded by a number of heterodox Marxist historians who see armed force as crucially catalytic to capitalist development. Thus Robert Kurz ([1997] 2011) proposes that the seeds of capitalist modernity lie in the sixteenth-century “revolution in military affairs” arising from the discovery of firearms, demanding both large-scale military manufacturing and standing armies of paid soldiers—the “first waged workers.” Peter Linebaugh and Marcus Rediker (2000) suggest that naval warships of the eighteenth century were not just maritime vehicles of mercantile expansion but provided a prototype for the disciplined organization of factory labor. Similarly, David Noble (1986), who carefully documented the links between industrial and military adoption of cybernetic technology, found precedent for this in the spurring of nineteenth-century machine production in the United States by the requirements of Civil War–era arsenals and ordnance departments for large-scale, standardized arms production. All suggest that war is a root, not a branch, of capital’s successive technological revolutions. Following this line, we will say that the history of cyberwar is not just that war is transformed by cybernetic capitalism but rather that war creates cybernetic capitalism. A scrupulous reading of how “cyber” drives “war” will necessarily reveal that it is “war” that drives “cyber.” The destroying force that propelled cybernetics was arguably more massive than any earlier example of the armed impulse to capitalist innovation, for it was provided by the mid-twentieth-century U.S. military–industrial complex forged in the world wars and the Cold War. Cybernetics has two meanings. The first designates a specific school of scientific thought that emerged during the 1930s and 1940s among researchers working on radar, ballistics, crypto-analysis, and atomic weapons for the U.S. and British war effort and that metaphorically adopts the Greek term cyber—for “governor”—to designate the concept of machines as entities governed by information control (Johnston 2008). The second, broader sense metonymically transfers the term to the entire realm of computer systems, from mainframes to mobiles, in whose evolution the work of the original cyberneticists played a crucial role. In both senses, cybernetics was born of war, whether as the fire-control systems for antiaircraft batteries developed by Norbert Weiner, the code-breaking computers developed by Alan Turing so central to intelligence operations, or the computing devices critical to calculating the effects of atomic fission pioneered by John von Neumann and others, vital to the development of nuclear weapons. Thus war becomes “cyber” by 1945, well prior to other spheres of capital. This also means that at the root of cybernetics is not just geopolitical strife but class conflict. For if the development of computers by the United States and its allies was initially driven by the struggle against fascism, this propulsive institutional force was very rapidly taken over by the antagonism with the former wartime ally, the USSR, whose central role in the defeat of Nazism by 1945 positioned state socialism—however monstrously “bureaucratically deformed”—as a systemic challenger to the supremacy of U.S.-led capitalism. It is in the Cold War that the “cyber” really gets into “war,” incubated within the U.S. “iron triangle” of military, corporate, and academic interests—which met the Pentagon’s computing needs (Edwards 1996, 47). Thus, as Noble and others have tracked, the computerization of industrial processes is initiated by military projects such as the Whirlwind computer, developed by MIT for the U.S. Navy as a flight simulator; the massive Semi-Automatic Ground Environment (SAGE) air-defense system, intended to protect North America from Soviet bombers; and the “secret empire” of signals intelligence and spy satellites of the NSA’s “code warriors” (Taubman 2003; Budiansky 2016). Cybernetics also found its way onto “hot” battlefields of the Cold War, whose casualties are reckoned in millions. Operation Igloo White became a major part of the bombing of Vietnam, seeding the Ho Chi Minh trail with motion sensors communicating with a secret central control room in the jungles of Thailand where, behind airlock doors, IBM technicians processed a stream of dubious data on the supercomputers of the age to call in air strikes on troop convoys— or misidentified peasants (Edwards 1996; Cockburn 2015; Levine 2018). Of particular importance to the computer industry was its deep connection to nuclear war preparation. Many consider MANIAC, the ironically named Mathematical Analyzer, Numeric Integration and Computer, developed to model the fission and fusion processes of the hydrogen bomb, the first modern computer with random access memory containing both data and instructions. The role of computers in simulating the extraordinarily complex dynamics of nuclear explosion continued to propel digital innovation and was of critical importance. As Blake Wood (2005) observes, from 1945 to 1975, when “all features of the modern nuclear weapons and many of the US stockpile devices were designed,” the development of computer technology was “driven by the nuclear weapons program” (emphasis original). Nuclear war also originates the internet. It is well known that Paul Baran developed the idea of digital packet switching working as a RAND Corporation employee on the problem of making military communication survivable in the midst of nuclear war (RAND 2008; Metz 2012). These principles were first actualized in the digital network developed by the Pentagon’s Advanced Research Project Agency (ARPA), although they were used to connect computer facilities for scientists working on military-funded research rather than missile bases. Many computer scientists who worked on ARPANET have been keen to stress the autonomy of their research from directly military purposes (Hafner 1998). But as Janet Abbate (1999, 76) observes in her detailed account of the “invention of the internet,” despite the perception of computer scientists and graduate students that ARPA doled out research funding with little concern for its application, military imperatives in fact drove the research agenda. Yasha Levine (2018) has recently documented how aware ARPANET’s famous director J. R. Licklider, who had himself worked on U.S. nuclear war air-defense systems, was of the network’s military priorities. ARPA allowed its employees considerable latitude, but as a sophisticated sponsor harvesting technological experimentation for techniques of annihilation. Silicon Valley thus grew as a global center of digital industry supported by military contracts from firms such as Raytheon, IBM, and Sperry. It drew on a new type of scientific worker—the computer hacker, in the term’s original meaning of a digital tinkerer or experimentalist—created in university departments funded by military research. Many accounts of the information revolution tell a “swords into plowshares” story in which the internet is rapidly hacked free from military tutelage by system administrators and students at large universities, liberated for use by researchers and countercultural experimenters, and then by commercial developers, who take the digital on a fast march away from governmental supervision. This narrative is partially true. From the 1980s on, the digital economy was increasingly privatized, deregulated, and directed toward meeting business needs and creating consumer commodities (Schiller 1999). Today corporations like Google, Amazon, Apple, and Facebook exercise a level of control over technological innovation and policy that seems to surpass that of the government that initially seeded the computer revolution. But focusing on the escape of digital capital from its martial incubator obscures the continuing involvement of the “iron triangle” (Edwards 1996, 47) of military, industrial, and academic interests in internet and computer development, both as an instigator of research from which civilian innovation is spun off and, in turn, as recipient of civilian technologies adapted to military purposes. And this is so through the entire progression of “cyber,” from “first-order” cybernetics as a system of automation (such as the antiaircraft fire systems Weiner worked on) to “second-order” cybernetics as networks (ARPANET) and “third-order” cybernetics as automated algorithmic networks (such as the surveillance systems of today’s NSA) (Bousquet 2009; Rid 2016). Indeed, though the nuclear weapon systems to which computers and networks were so integral were not used in war after 1945, it was arguably a form of “cyberwar” that eventually won the Cold War for capitalism. New generations of first-strike nuclear weaponry developed by the Reagan administration—cruise missiles, Trident submarine-based intercontinental ballistic missiles, and the Strategic Defense Initiative “Star Wars” systems, all deeply dependent on computerized guidance, navigation, and targeting (Scheer and Zacchino 1983; Aldridge 1999), drew the Soviet Union into what it found an unaffordable arms race. Its planners confronted an intractable choice between “guns or butter”: more high-tech weaponry or the consumer goods demanded by an increasingly dissatisfied populace. This direct military pressure was in turn part of a broader economic defeat, as the USSR’s industrial strengths were overtaken by new informational forces of production spun off from the Pentagon matrix and rapidly germinating in Silicon Valley (Shane 1995).2 The USSR’s cyberneticists, fatally hampered by a repressive state apparatus, failed to match developments not only in personal computing but, even more strikingly, in networks (Spufford 2010; Peters 2016). It is on the field created by the defeat of the state socialist project that there would emerge the new interstate hostilities driving today’s cyberwar.

#### Climate scenarios based on tech are doomed to fail. Removing our obsessive relationship with technology is a prerequisite to addressing climate change- we can’t rely on developing tech like carbon-capture to save us

Von Hirschhausen, et al 12 [(Christian, et al), 3-2012, “How a ‘Low Carbon’ Innovation Can Fail—Tales from a ‘Lost Decade’ for Carbon Capture, Transport, and Sequestration (CCTS).” Economics of Energy & Environmental Policy, vol. 1, no. 2, International Association for Energy Economics, pp. 115–24, <http://www.jstor.org/stable/26189495>] ZS

The idea that CCTS could constitute a low-carbon technology on the path towards a sustainable energy system emerged in the late 1990s. Climate change was becoming a global issue, and a general consensus emerged on the need to intensify R&D efforts beyond nuclear fission and fusion that governed the majority of civil and military energy research since the 1950s. Clearly, individual parts of the CCTS value-added chain already existed: i) CO2 capture was common in various industries for various production requirements; ii) CO2 transportation by pipelines was already used in the U.S. for some time; and iii) both natural underground (caverns) and artificial (manmade tanks) gas storage were prevalent. However, the combination of these parts had never been practiced, and as of today still does not exist on a commercial scale. The growth of policy documents and academic literature published towards the middle of the decade suggests that (assuming a time lag of several years before prominent ideas become peer-review published) the turn of the century can be considered as the birth of the global vision for CCTS; see Jaccard (2005), IPCC (2005), and MIT (2007) for important milestones in this process. Soon, the climate, innovation, and conventional energy community became carried away by the idea of large-scale deployment of CCTS. The sudden rise in popularity can be explained by the fact that it married industrial and policy interests and stakeholder communities that usually opposed or, or mostly ignored one another: the traditional fossil fuel burning industry believed in a device that would extend an otherwise endangered industry, renewable advocates believed that biomass with CCTS would save the 2 goal of climate policy, the nuclear/ hydrogen community discovered a new ally in CCTS, and the R&D community joined in with pleasure as research funds flowed. It came as no surprise, that this general ardor produced visions of the future where CCTS—if it was not the silver bullet—became an essential element in any proposed low-cost climate policy scenario. Both the OECD governments (e.g. IEA, 2009), and the climate and energy system modeling community (e.g. Leimbach et. al., 2010) assumed that ambitious climate targets could not be reached without CCTS. Thus, IEA (2009) expected that the overall costs to reduce emissions to 2005 levels by 2050 would increase by 70% absent CCTS technology. Among the CCTS abatements until 2050, 55% were supposed to come from fossil fuel electricity generation (coal and gas), 16% from industry, and 29% from upstream capture (e.g. gas processing and fuels transformation). There were two key assumptions: i) CCTS represented relatively cheap CO2-abatement, and ii) biomass-CCTS might achieve negative emissions. IEA (2009) also translated these targets into a timeline of real projects to be carried out until 2050 in order to comply with certain climate targets. Its “Blue Map Scenario” provided a detailed plan for the CCTS rollout, including regional, sectoral, and temporal objectives. Demand for transportation facilities was estimated at 200,000–360,000 km of pipelines in 2050, mostly in North America, China, and OECD Europe. The demand for storage capacity would be met by the worldwide development of storage facilities accumulating 145 Gt CO2 by 2050. The IEA roadmap also set milestones for the short-term horizon in line with announcements in 2008 by the G8 to develop 100 CCTS projects from 2010 to 2020. Whereas the initial goals of 38 electricity projects and 62 industry projects appeared realistic on a global scale, the number of projects soon rose exponentially to 1,632 (energy) and 1,738 (industry) by 2050, with a total amount of CO2 captured of 10 bn.t annually and total investment costs of $5.8 trn. Today, the high hopes for CCTS are far from becoming reality and the energy and heavy industries which initially pursued CCTS development have backed away. First movers, such as the U.S., Canada, and Norway, have shifted attention to traditional uses of captured CO2 for enhanced fossil fuel recovery, which has little to do with CCTS (MIT, 2007, xii). European countries with ambitious R&D and demonstration objectives, such as the UK, the Netherlands, Germany, and Poland, have delayed or shelved all major pilot projects. The world’s two largest coal burning nations, instead of becoming interested customers of the technology, are pursuing their own, very modest research (China) or ignoring CCTS altogether (India). Strictly speaking, not a single CCTS project has been realized, in the sense of an operation at significant scale that captures, transports, and stores CO2 permanently. Within the OECD, very few operations have been developed or tested out of a total of 69 practical projects planned (see Herold et al. (2010), Annexes 4 (capture) and 5 (transport and storage)). Since their small sizes, from 5–35 MWth, qualify them only as pilot projects, little information can be deduced regarding the potential technical and economic aspects of these demonstration plants. Several country-specific, modest attempts to get CCTS chains at scale to work commercially support our theory of a lost decade for carbon. There is a striking discrepancy between the ambitious targets set out for the technology and the failure of all countries to engage in a sustainable development path for the CCTS value-added chain: thus, the United States, a global leader in CCTS development, has only four partial projects already operating and three under development (see GCI, 2011 for a detailed listing). Large amounts of public funds were allocated.1 However, Future Gen, the federal government’s flagship project of an integrated, pre-combustion CCTS-chain conceived in the early 2000s, is unrealized. Five years into the project set-up, this public-private partnership to be developed in the state of Illinois ended in 2009.2 Canada has quite rapidly abandoned its initial push for broad deployment of CCTS, deciding to return to using CO2 for EOR/EGR as practiced for decades, rather than pursuing permanent storage. The technological approach in Alberta, the country’s largest fossil-fuel producing region, can be considered representative for the strategy of relying on EOR/EGR instead of CCTS: three of the four pilot projects to which the provincial government has pledged CDN $2 bn are de facto EOR-focused, whereas only one, the Shell Quest Project, foresees the capture of 1.2 mn. t of CO2 annually and storing it in a company-owned site near the province of Saskatchewan. Australia is pursuing some demonstration projects; $A1.68 bn has been allocated to partly fund CCTS flagship projects in addition to $A400 mn for the National Low Emissions Coal Initiative. The revenues of the carbon tax will be used in a $A10 bn fund to promote investment in renewables and energy conservation and efficiency technologies. There is public opposition to CCTS projects, and the perceived need to mitigate process-based emissions from industrial activities. Transportation is particularly challenging due to very poor sinksource matching, with thousands of kilometers of pipeline transport needed. Europe, too, has little to offer in terms of CCTS success stories, despite sufficient EU and national funding in the early phase, and a CCTS-Directive obliging all Member States to establish an appropriate legal framework. Among the six projects identified to receive EUEEPR-support in 20083 , only one may be considered to have made some progress—the Rotterdam post-combustion project, Maasvlakte, which is not a CCTS project, but will be used for EGR. All other projects have either been postponed or cancelled (see Herold, 2012, for details). The UK had been particularly innovative with a supposedly incentive-compatible scheme introduced in 2007 backed by UKP1 bn in additional national funds. A tender was specified in which the government would repay all additional costs related to the introduction of CCTS. Of only three projects submitted in 20094 , two withdrew the same year and the remaining project (Longannet), which did not meet the technical criteria, was cancelled in winter 2011. Germany, traditionally leaning towards carbon-intensive power, is a striking example of initial enthusiasm and later abandonment of the concept of an integrated CCTS value-added chain. CCTS rapidly became popular among politicians as a potential low-carbon technology whereby German industry, heavily reliant on coal-fired power plants and with an important industrial base, could develop a comparative economic advantage. In 2009, Vattenfall constructed the first small pilot plant (30 MW thermal oxyfuel; since operating without problems), which was to be followed by a demonstration plant in 2015 ( Ja¨nschwalde, 250 MW oxyfuel and 50 MW slipstream post-combustion); in West Germany, RWE planned an IGCC pre-combustion capture demonstration facility in Hu¨rth. However, all demonstration plants have been cancelled. Whether the real cause was due to an erosion in corporate support or merely good corporate strategy, nonetheless, the La¨nders’ strong resistance also resulted in the failure of the German Parliament to implement the EU Directive in 2009 and 2011. In October 2011, German Environmental Minister Norbert Ro¨ttgen closed the debate, stating that, “CCTS was not necessary to succeed the energy transformation in Germany”.5 The Netherlands, the second-biggest CCTS supporter of the EU Directive after the UK, announced in February 2011 that it would not allow any onshore CO2 storage due to strong public resistance. Both remaining demonstration projects, Maasvlakte, a 250 MW post-combustion facility, and a green hydrogen pre-combustion industrial project, thus rely on offshore gas fields as storage options in conjunction with EGR, not CCTS. Likewise, Norway, initially a CCTS supporter, has linked its current projects (Sleipner and Snovit) to offshore storage in oil or gas fields, aiming at an increase in oil and gas production. Little support for a breakthrough of CCTS can be expected from emerging countries, even though they are potentially the largest coal users in the world. China, the global leader in emissions (7 Gt CO2 in 2008), is fashioning national policy to foster economic growth and subsidize cheap energy. CCTS has only recently garnered attention. There are two small pilot plants, the IGCC Greengen project in Beijing that should begin operation in 2016, and the Shenhua Coal-to-Liquids Plant in Tainji. India, is targeting electrification and the provision of cheap, reliable power to rural sectors; 40% of the population still lacks electricity. Thus, CCTS ranks low on the government’s energy policy agenda. India’s storage sites are located far from potential CO2-separation units, and would require major transnational CO2- pipelines.

#### Space is the new frontier of war driven by the lust for technological expansion. We conquer and weaponize space, turning it into yet another battleground to flaunt our progress

Kroker 04

[Arthur, Great Value-brand Jean Baudrillard. 2004. “The Will to Technology and the Culture of Nihilism: Heidegger, Nietzsche, and Marx.”] pat

With this, the age of Artificial War has begun. In its manifesto for the future of cyber-war, Vision 2020, the newly created United States Space Command theorizes a future battlefield of "full spectrum dominance." Abandoning the earth-bound dimensions of land, sea air, USSPACECOM projects a new era of artificial war in which the battlefield occurs in the "4th dimension" of space. Befitting a "space-faring nation" such as the United States, third-dimensional warfare is surpassed by a vision of future war in which "battle managers" are, in essence, computerized editing systems running on automatic, absorbing fluctuating data fields concerning attacks and responses, monitoring satellite transmissions from 20,000 miles in deep space, sequencing missile launches, integrating "dominant maneuvers" in space with "precision engagement" on the ground, sea and air, providing "full-dimensional protection" to "core national assets" and focusing logistics" for a virtual battlefield that stretches into an indefinite future. As USSPACECOM theorizes: the control of the seas in defense of commercial economic interests and the war of the western lands in defense of the expansion of the American empire to the shores of California has now migrated to a war for the "control of space" befitting a "space-faring nation" like the United States, this spearhead of technology. Consequently, a future of artificial warfare in which space itself is weaponized. 4th Dimensional warfare is the technical language by which the American empire now projects itself into a future of Artificial War: a 4th Dimensional rhetoric of "global engagement," "full-force integration," "global partnerships," weaponized space stations, tracking satellites, reusable missile launchers, and on-line, real-time remotely controlled anti-missile systems. I emphasize this story because it is revelatory of the meaning of the will to technology. Here, technology is not only the chosen aim of technological instrumentality (weaponizing space), but also involves technologies of mythology (the well-rehearsed story of the unfolding American frontier where wagon trains evolve into Predator Drones, and sea-faring navies migrate into space-bound automated battlefield manager systems), technologies of thinking (the fourfold "tactics" of space war: dominant maneuver, precision engagement, full-dimensional protection, focused logistics), and technologies of (aggressive) judgment ("multinational corporations" are also listed in Vision 2020 as potential 'enemies' of USSPACECOM). More than futurist military doctrine for the 21st century, Vision 2020 represents the essence of the will to technology. Here, technology is both a space-faring means to the successful prosecution of artificial warfare and its sustaining ethical justification. The will to technology folds back on itself--a closed and self-validating universe of thinking, willing, judging, and destining--that brooks no earthly opposition because it is a will, and nothing else. As Nietzsche reflected in advance: "it is a will to nothingness." Or, as Hannah Arendt eloquently argues in her last book, The Life of the Mind, "the famous power of negation inherent in the Will and conceived as the motor of history (not only in Marx but also, by implication, already in Hegel) is an annihilating force that could just as well result in a process of annihilation as of Infinite Progress." Could it be that the world-historical movement captured by the military logic of Vision 2020-- this command vision of America as the historical spearhead of the will to technology-- represents that which is probably unthinkable but consequently very plausible, a contemporary expression of the metaphysics of "not-being?" If "permanent annihilation" is the sustaining (military) creed of Vision 2020, then this also indicates that the world-historical movement, which it so powerfully strategizes, is driven onwards by the seduction of negation, another suicide note on the way to the weaponizing of space. Consequently, if the American novelist, Don DeLillo, can write so eloquently in his recent essay, "In the Ruins of the Future," that '(T)echnology is our fate, our truth" this also implies that in linking its fate with the "truth of technology," the United States, and by implication the culture of globalization, may have, however inadvertently, infected its deepest political logic with the will to nihilism. In the sometimes utopian, always militaristic, language of technological experimentalism, "Not-being" finally becomes a world historical project. Those who are only passive bystanders to the unfolding destiny of the contemporary American descendents of the Puritan founders can only look on with amazement coupled with distress as the "American project" embraces not only the weaponizing of space but also genetic experimentation with the question of evolution itself. While DeLillo goes on to say that (technology) "is what we mean when we call ourselves a superpower," his pragmatism sells short the point he really wants to make: namely, that by linking its fate, its truth, with the question of technology the United States has also enduringly enucleated itself within the larger historical, indeed if USSPACECOM is to be believed, post-historical, project of technology. Enucleated not as something other than the technological destiny which is its profession of faith, of truth, but enucleated in the more classical sense of the term, of being somehow interior to the unfolding destiny of the will to technology. The larger cultural consequence of this bold act of willing remains deeply enigmatic. In this case, is the will to technology an intensification of the pragmatic spirit upon which the American experiment was founded? Or has the will to technology, at the very moment of its historical self-realization, already reversed its course, becoming its own negation: Arendt's prophecy of "not-being" as a "process of annihilation." On the ultimate resolution of this question depends the American fate, the American truth, as the spearhead of technology. On the public evidence, what makes the American project truly distinct today is its enthusiastic abandonment of the pragmatic will for the uncharted metaphysical territory of "not-being." The will to the conquest of empty spatialization and the vivisectioning of the code of life itself has about it the negative energy of suicidal nihilism. Here, the language of "not-being"--the desiccating logic of what Heidegger memorably termed, "Nothingness nothings" as the historical form of the technological project of "permanent annihilation" --expresses itself vividly in two master commands: Space Command and Genetic Command. The first operates in the language of weaponized astrophysics where the curvature of space is manipulated for strategic purposes, and the other sequences the human genetic code itself. Thus, control of space is inextricably linked with control of time. The dynamic will to technology projects itself doubly in the macrophysics of a "space-faring nation" and the microphysics of a body-faring cellular biology. This is a collective demonstration of hubris that Greeks in the classical age would only admire, and then fear, for its (technical) audacity and stunning (metaphysical) innocence. Ironically, at the very instance that USSPACECOM projects an imperialist military future of "full spectrum dominance," 9/11 occurs and we are suddenly time-shifted into the age of viral terrorism. Similar to the incommensurability of technology itself where the reality of "permanent annihilation" is sometimes offset by other ways of thinking technology, the human imagination does not begin, cannot begin, with tactics of 'dominant maneuver' and 'precision engagement' and 'full-dimensional protection' and 'focused logistics' but, with the terrorist side of fluid, earth-bound, real material warfare. Artificial war, then, as a prolegomenon to the codes of technology.

#### Thus, I affirm the resolution Resolved: The appropriation of outer space by private entities is unjust. We employ the concept of The Inhuman to reject Cybernetics and reconfigure our relationship with technology- doing so is the only way to truly rid space of appropriation

#### You should understand the aff as an analysis of our orientation to technology that reconfigures thought from cybernetic to techno-diverse- by rejecting the appropriation of space, we reject the societal narrative of limitless and inexhaustible technological progression. The Inhuman is our metaphor for separating humanity from its mechanical counterpart.

Hui 19

[Yuk, teaches at the Bauhaus University in Weimar and is a visiting professor (PhD supervision qualification) in philosophy and technology at the China Academy of Art. 2019. “Recursivity and Contingency.”] pat

We would now like to return to Lyotard’s critique of system and to offer a reinterpretation of his concept of the inhuman. It is important to bear in mind that the form of resistance Lyotard is talking about here is not a humanist critique but rather inhumanist. The concept of system poses a major problem to Lyotard and is one of the main features of postmodern society. If systemic thinking becomes dominant, it is because it shows itself to be a better explanation of the efficient cause and the final cause. It is against system that Lyotard proposes the concept of the inhuman. The inhuman is the leading concept of his collection of essays and conference presentations that he delivered to a general audience: The Inhuman: Reflections on Time. Although it is not written for specialists, The Inhuman remains one of the most important publications of Lyotard, since it also allows him the freedom to speculate on some themes that appear “too dialectical to take seriously.” The systemic becoming is the inhuman, since it owes its metaphysical root to development; it is the mastery of human being over all beings: The striking thing about this metaphysics of development is that it needs no finality. Development is not attached to an Idea, like that of the emancipation of reason and of human freedoms. It is reproduced by accelerating and extending itself according to its internal dynamic alone. It assimilates contingencies [hasards], memorizes their informational value and uses this as a new mediation necessary to its functioning. It has no other necessity than a cosmological chance [hasard]. How should we understand the two occurrences of the word hasard in this passage? We rendered the first as contingency, because becoming system means precisely the capacity to assimilate contingencies into its operation. That is to say, contingency is not something destructive that interrupts the causalities of the system, but rather that which allows the system to empower its internal dynamic. We render the second occurrence of hasard as chance or accident, since in such a system there is no longer any difference between necessity and contingency, as what we tried to demonstrate with Schelling’s concept of nature. Recursion extends from the mechanism of nature to the mechanism of the machine, the mechanism of capital and now the mechanism of globalized culture. Development, as Lyotard continues, “has thus no end, but it does have a limit, the expectation of the life of the sun.” What is meant by an endlessness with a limit, an affirmative negation? This brings us to the famous essay in the collection, “Can Thought Go On without a Body?” This essay is a conversation between a female interlocutor and a male philosopher. It starts with an event, which is the explosion of the sun in 4.5 billion years’ time that will put an end to all organic life, an event after which nothing is thinkable—an event that Lyotard himself coins solar catastrophe and Ray Brassier considers to be the ultimate challenge to what Quentin Meillassoux calls “correlationism.” The destruction of all organic life points to the only possibility for the survival of the human, which is the separation between body and mind, between hardware and software. This metaphor of software and hardware is technological, but it is also not a metaphor because it is a research agenda that covers everything from dietetics, neurophysiology, genetics, and tissue synthesis to particle physics, astrophysics, electronics, information science, and nuclear physics. The search for the separation between thinking and organic life is a response to the prospect of solar catastrophe, since the central question is, how is it possible to survive without an organic form of life? Or, as Lyotard puts it: “[H]ow to provide this software with a hardware that is independent of the conditions of life on earth?” This is a negative organology, or an extreme humanism. It is negative since it is based on a total negation of the organic and on the belief that there is a possibility, no matter how small it might be, of replacing the organic body with an inorganic artifice for the survival of thinking. Lyotard, through the incarnation of a female interrogator called Him, implicitly goes back to the recursive structure of organization and the possibility that such a recursive algorithm could be independent from the organic body: Most of all: [human]’s equipped with a symbolic system that’s both arbitrary (in semantics and syntax), letting it be less dependent on an immediate environment, and also “recursive” (Hofstadter), allowing it to take into account (above and beyond raw data) the way it has of processing such data. . . . Isn’t that exactly what constitutes the basis of your transcendence in immanence? The notion of recursivity is raised here, but Lyotard does not explore the relation between recursivity and reflective judgment further. He did not understand the concept of recursion, just as he had already dismissed information theory in cybernetics for its “triviality” earlier in his The Postmodern Condition. Here he is prepared to reject this thesis by invoking Hubert Dreyfus, whose What Computers Cannot Do? A Critique of Artificial Reason (1972) challenged the research in artificial intelligence (AI) of that time as being too Cartesian in the sense that AI reduces intelligence to a very limited way of knowing. This could be briefly explained with what in classical AI or “Good Old-Fashioned AI” (GOFAI) is called the frame problem, which is about the AI’s description of the world. In order to know an event or an environment, the AI will have to produce a huge amount of descriptions. However, it remains very difficult to contextualize these descriptions. It is Cartesian because, in this form of knowing, everything is merely present-at-hand in the sense of Heidegger, while it ignores the fact that in the preoccupations of everyday life Dasein encounters situations that are ready-to-hand and have to do with embodiment and intuition. The rejection of reducing thinking to a binary form is also a rejection of the separation between body and mind. The philosopher, who is challenged in this dialogue, is also a phenomenologist. He has to defend the importance of the body and of sexuality, since without the body and without sexuality, can thinking exist at all? Brassier has nicely summarized the perspectives of the two interrogators: one for which the inseparability between thought and its material substrate necessitates separating thought from its rootedness in organic life in general, and the human organism in particular; another according to which it is the irreducible separation of the sexes that renders thought inseparable from organic embodiment, and human embodiment specifically. If becoming system presents a negativity for Lyotard, this is because it is based on a negative organology, which ignores the question of life and existence. And if Lyotard here invokes this negativity, it is because he wants to think through the question of resistance, as he asks in his introduction: “[W]hat else remains as ‘politics’ except resistance to this inhuman?” This resistance is also inhuman since the negative inhuman doesn’t occupy the totality of this concept. Like the sublime, the inhuman also has its double, as Lyotard emphasizes: “The inhumanity of the system which is currently being consolidated under the name of development (among others) must not be confused with the infinitely secret one of which the soul is hostage.” The inhuman is truly posthuman in the sense that it considers the dissolution of the human as messages, waves, particles, and cells. However, the inhuman is not transhuman. Although the inhuman shares the negativity of the transhuman—that is to say, it is imprisoned by the fanaticism of development or technological singularity—at the same time it resists such negativity not by rejecting a human-machine hybridity but by rejecting the tendency imposed by a transhumanist ideology that is motivated by the anticipation of the solar catastrophe and desire of inorganic immortality. What is meant by “the infinitely secret one of which the soul is hostage”? Ashley Woodward identifies the double of the inhuman by suggesting that the negative inhuman can be identified with nihilism, and further that art is the second sense of the inhuman. However, I have strong reservations about this second observation since this is too narrow and it does not seem to be what Lyotard was referring to, though it is interesting here to consider in art the potential of overcoming the determination of the system. If the soul is the hostage of the inhuman, it is because the inhuman is like its preindividual reality as well as its call. It is like water to fish: Even though the latter live in the former, it remains transparent to it. This inhuman cannot be reduced to calculation and to representation. The possible explanation of seeing an intimacy between art and the inhuman is that art sends the system back to a primordial creativity in order to undo the totalization of the system. It is clearer when we refer to Lyotard’s reading of Augustine. However, instead of discussing his The Confession of Augustine, I will instead make a short-cut by referring to an episode of a TV program called Apostrophes that was broadcast on the January 9, 1981. I transcribe part of the lengthy conversation below. JFL: You remember that in the eleventh book that you cited, and that you remember, those confessions, there is this formula, it is a god more interior in myself than me, that is what I make allusion to, what Wilson searches, it is that, isn’t it? There is something in me which is more interior in myself than me, well, this what I call the inhuman, I have the right, it is perfectly clear, in fact, because it is just something with which I will never arrive at having . . . Interrogator: Vulgarly, when we employ the word inhuman, we think about the horrible, appalling, cruel, and detestable, we don’t think about interior being which unfolds . . . JFL: You do it on purpose! Interrogator: But I am not philosopher, I am journalist, I am a bit flat. Lyotard sometimes refers to this inhuman “which is more interior in myself than me,” as la chose or the child, which carries within it the antidote to the negative inhuman. However, these two inhumans are not completely separate, since the latter is also partially a condition for the former, without which the positive inhuman remains merely an element of theology, meaning that there is only one mode of rationalization of the Unknown through God. The logical sense of the inhuman is exemplified in Ludwig Wittgenstein and Gödel, since both logicians refused the subordination to positivism. Like Gödel, who shows the incompleteness of any logical system in terms of proof, for his part Wittgenstein “did not opt for the positivism that was being developed by the Vienna Circle, but outlined in his investigation of language games a kind of legitimation not based on performativity.” The positive inhuman is that which resists systematization and reduction to calculation. The question is, how can we articulate the question of the inhuman, which is not hermeneutic, and not reflexive, without returning to theology or mysticism? The concept of the inhuman (like the Unknown) should be considered an organological concept rather than a theological one since it is not necessarily the transcendent God. Lyotard rejects the reduction of thinking to algorithms or to the determination of any technological system, but he doesn’t explicitly reject technology. In some places the intimacy between technology and culture as modes of inscription is the condition under which thinking is possible, and this condition always carries a negative dimension such as incompleteness, lack, or obstacle: [W]e think in a world of inscriptions already there. Call this culture if you like. And if we think, this is because there’s still something missing in this plenitude and room has to be made for this lack by making the mind a blank, which allows the something else remaining to be thought to happen. But this can only “emerge” as already inscribed in its turn. There is something that presents itself as a lack, which hurts the already thought as plenitude, since it suspends the already thought in order to allow something new to come. Like the leaving of blank margins in Chinese and Japanese calligraphy and painting, the empty is what completes the fullness; the empty is already inscribed. I would like to return to what we discussed in the previous chapter regarding the rationalization of the incalculable or the unknowable, though here Lyotard may use the terms unpresentable or unthinkable. The transcendence would be challenged by the transhumanists: What could not be thought by a superintelligence? And if all is already inscribed in the superintelligence, there is no longer an unthought. Does it also mean that there will be no longer any thinking, and no longer anything contingent?

#### Our resistance is tangible- The aff generates interventions into the structure of imperialism. Targeted material resistance has the power to uproot Cybernetics and collapse the system

Tiqqun 01 [French leftist philosophical journal, founded in 1999 with an aim to "recreate the conditions of another community." Probably not you. 2001. “The Cybernetic Hypothesis,” [https://theanarchistlibrary.org/library/tiqqun-the-cybernetic-hypothesis](https://theanarchistlibrary.org/library/tiqqun-the-cybernetic-hypothesis#toc11)] pat

These questions, seen from the neutralized and neutralizing perspective of the laboratory observer or of the chat-room/salon, must be reexamined in themselves, and tested out. Amplifying the fluctuations: what’s that mean to me? How can deviance, mine for example, give rise to disorder? How do we go from sparse, singular fluctuations, the discrepancies between each individual and the norm, each person and the devices, to futures and to destinies? How can what capitalism routs, what escapes valorization, become a force and turn against it? Classical politics resolved this problem with mobilization. To Mobilize meant to add, to aggregate, to assemble, to synthesize. It meant to unify little differences and fluctuations by subjecting them to a great crime, an un-rectifiable injustice, that nevertheless must be rectified. Singularities were already there. They only had to be subsumed into a unique predicate. Energy was also already there. It just needed to be organized. I’ll be the head, they’ll be the body. And so the theoretician, the avant-garde, the party, have made that force operate in the same way as capitalism did, by putting it into circulation and control in order to seize the enemy’s heart and take power by taking off its head, like in classical war. The invisible revolt, the “coup-du-monde” [world coup] that Trocchi talked about, on the contrary, plays on potential. It is invisible because it is unpredictable in the eyes of the imperial system. Amplified, the fluctuations relative to the imperial devices never aggregate together. They are as heterogeneous as desires are, and can never form a closed totality; they can’t even form into a “masses,” which name itself is just an illusion if it doesn’t mean an irreconcilable multiplicity of lifestyles/forms-of-life. Desires flee; they either reach a clinamen or not, they either produce intensity or not, and even beyond flight they continue to flee. They get restive under any kind of representation, as bodies, class, or party. It must thus be deduced from this that all propagation of fluctuations will also be a propagation of civil war. Diffuse guerrilla action is the form of struggle that will produce such invisibility in the eyes of the enemy. The recourse to diffuse guerrilla action taken by a fraction of the Autonomia group in 1970s Italy can be explained precisely in light of the advanced cybernetic character of the Italian govern-mentality of the time. These years were when “consociativism,” which prefigured today’s citizenism, was developing; the association of parties, unions, and associations for the distribution and co-management of Power. This sharing is not the most important thing here; the important thing is management and control. This mode of government goes far beyond the Providential State by creating longer chains of interdependence between citizens and devices, thus extending the principles of control and management from administrative bureaucracy. It was T.E. Lawrence that worked out the principles of guerrilla war from his experience of fighting alongside the Arabs against the Turks in 1916. What does Lawrence tell us? That the battle itself is no longer the only process involved in war, in the same way as the destruction of the heart of the enemy is no longer its central objective; a fortiori if this enemy is faceless, as is the case when dealing with the impersonal power materialized in the Empire’s cybernetic devices: “The majority of wars are contact based; two forces struggling to remain close to one another in order to avoid any tactical surprises. The war of the Arabs had to be a rupture based war: containing the enemy with the silent threat of a vast desert unknown to it and only revealing themselves at the moment of attack.” Deleuze, though he too rigidly opposed guerrilla war, posed the problem of individuality and war, and that of collective organization, clarified that it was a question of opening up space as much as possible, and making prophecies, or rather of “fabricating the real instead of responding to it.” The invisible revolt and diffuse guerrilla war do not sanction injustices, they create a possible world. In the language of the cybernetic hypothesis, I can create invisible revolt and diffuse guerrilla war on the molecular level in two ways. First gesture: I fabricate the real, I break things down, and break myself down by breaking it all down. This is the source of all acts of sabotage What my act represents at this moment doesn’t exist for the device breaking down with me. Neither 0 nor 1, I am the absolute outsider/third party. My orgasm surpasses devices/my joy infuriates them. Second gesture: I do not respond to the human or mechanical feedback loops that attempt to encircle me/figure me out; like Bartleby, I’d “prefer not to.” I keep my distance, I don’t enter into the space of the flows, I don’t plug in, I stick around. I wield my passivity as a force against the devices. Neither 0 nor 1, I am absolute nothingness. Firstly: I cum perversely. Secondly: I hold back. Beyond. Before. Short Circuiting and Unplugging. In the two cases the feedback does not take place and a line of flight begins to be drawn. An external line of flight on the one hand that seems to spread outwards from me; an internal line of flight that brings me back to myself. All forms of interference/fog come from these two gestures, external and internal lines of flight, sabotage and retreat, the search for forms of struggle and for the assumption of different forms-of-life. Revolution is now about figuring out how to conjugate those two moments. Lawrence also tells how it was also a question that it took the Arabs a long time to resolve when fighting the Turks. Their tactics consisted basically in “always advancing by making small hits and withdrawing, neither making big drives, nor striking big blows. The Arab army never sought to keep or improve their advantage, but to withdraw and go strike elsewhere. It used the least possible force in the least possible time and hit the most withdrawn positions.” Primacy was given to attacks against war supplies, and primarily against communications channels, rather than against the institutions themselves, like depriving a section of railway of rail. Revolt only becomes invisible to the extent that it achieves its objective, which is to “deny all the enemy’s goals,” to never provide the enemy with easy targets. In this case it imposes “passive defense” on the enemy, which can be very costly in materials and men, in energies, and extends into the same movement its own front, making connections between the foci of attack. Guerrilla action thus since its invention tends to be diffuse. This kind of fighting immediately gives rise to new relationships which are very different than those that exist within traditional armies: “we sought to attain maximum irregularity and flexibility. Our diversity disoriented the enemy’s reconnaissance services... If anyone comes to lack conviction they can stay home. The only contract bonding them together was honor. Consequently the Arab army did not have discipline in the sense where discipline restrains and smothers individuality and where it comprises the smallest common denominator of men.” However, Lawrence did not idealize the anarchist spirit of his troops, as spontaneists in general have tended to do. The most important thing is to be able to count on a sympathetic population which then can become a space for potential recruitment and for the spread of the struggle. “A rebellion can be carried out by two percent active elements and 98 percent passive sympathizers,” but this requires time and propaganda operations. Reciprocally, all offensives involving an interference with the opposing lines imply a perfect reconnaissance/intelligence service that “must allow plans to be worked out in absolute certainty” so as to never give the enemy any goals. This is precisely the role that an organization now might take on, in the sense that this term once had in classical politics; serving a function of reconnaissance/intelligence and the transmission of accumulated knowledge-powers. Thus the spontaneity of guerrilleros is not necessarily opposed to organizations as strategic information collection tanks. But the important thing is that the practice of interference, as Burroughs conceived it, and after him as hackers have, is in vain if it is not accompanied by an organized practice of reconnaissance into domination. This need is reinforced by the fact that the space where the invisible revolt can take place is not the desert spoken of by Lawrence. And the electronic space of the Internet is not the smooth neutral space that the ideologues of the information age speak of it as either. The most recent studies confirm, moreover, that the Internet is vulnerable to targeted and coordinated attacks. The web matrix was designed in such a way that the network would still function if there were a loss of 99% of the 10 million routers — the cores of the communications network where the information is concentrated — destroyed in a random manner, as the American military had initially imagined. On the other hand, a selective attack, designed on the basis of precise research into traffic and aiming at 5% of the most strategic core nodes — the nodes on the big operators’ high-speed networks, the input points to the transatlantic lines — would suffice to cause a collapse of the system. Whether virtual or real, the Empire’s spaces are structured by territories, striated by the cascades of devices tracing out the frontiers and then erasing them when they become useless, in a constant scanning sweep comprising the very motor of the circulation flows. And in such a structured, territorialized and deterritorialized space, the front lines with the enemy cannot be as clear as they were in Lawrence’s desert. The floating character of power and the nomadic dimensions of domination thus require an increased reconnaissance activity, which means an organization for the circulation of knowledge-powers. Such was to be the role of the Society for the Advancement of Criminal Science (SASC). In Cybernetics and Society, when he foresaw, only too late, that the political use of cybernetics tends to reinforce the exercise of domination, Wiener asked himself a similar question, as a prelude to the mystic crisis that he was in at the end of his life: “All the techniques of secrecy, interference in messages, and bluffing consist in trying to make sure that one’s camp can make a more effective use than the other camp of the forces and operations of communication. In this combative use of information, it is just as important to leave one’s own information channels open as it is to obstruct the channels that the opposing side has at its disposal. An overall confidentiality/secrecy policy almost always implies the involvement of much more than the secrets themselves.” The problem of force reformulated as a problem of invisibility thus becomes a problem of modulation of opening and closing. It simultaneously requires both organization and spontaneity. Or, to put it another way, diffuse guerrilla war today requires that two distinct planes of consistency be established, however meshed they may be — one to organize opening, transforming the interplay of lifestyles/forms-of-life into information, and the other to organize closing, the resistance of lifestyles/forms-of-life to being made into information. Curcio: “The guerrilla party is the maximum agent of invisibility and of the exteriorization of the proletariat’s knowledge-power; invisibility towards the enemy cohabiting with it, on the highest level of synthesis.” One may here object that this is after all nothing but one more binary machine, neither better nor worse than any of those that are at work in cybernetics. But that would be incorrect, since it means not seeing that at the root of these gestures is a fundamental distance from the regulated flows, a distance that is precisely the condition for any experience within the world of devices, a distance which is a power that I can layer and make a future from. It would above all be incorrect because it would mean not understanding that the alternation between sovereignty and unpower cannot be programmed, that the course that these postures take is a wandering course, that what places will end up chosen — whether on the body, in the factory, in urban or peri-urban non-places — is unpredictable.

#### The Role of the Ballot is to think through virtual reality- considering a world in which the status quo of Cybernetics no longer exists. Our relationship to technology governs our very existence and the site of debate as an exchange of information collapses all thought into the cybernetic system. You should use your position as the judge to endorse research that resists this.

Kroker and Weinstein ’94 [Arthur, (post?)human meth pipe, and Michael Weinstein, Purdue University. 1994. “Data Trash.”] pat

Virtual reality sells the illusion of displacement. It allows you to jump out of the inertial drag of skin and bones, and patch into the cybernetic side of your schizoid other, leaving the “there” behind like a burning car wreck that quickly recedes in the rear-view mirror as you zoom down the freeway on the way from nothing to nowhere. Artificial games are the reality-principle of virtual culture: real cybernetic flesh, real vaporized eyes, real data organs. A strange matrix of play-functions for travelling across the electronic frontier. Ludic only because they are work training sessions for virtualized flesh, artificial games have a veneer of imaginative fantasy, but an inner reality of reworking the organic body into its virtual replacement. In this mirrored universe, things appear only in their opposite sign-form: games are, in fact, hard cyber-work for virtualized flesh. Artificial, here, means the grubbly street materialism of a new (cyber) reality-principle, in which fantasy is the projection of the operational logic of telematic life onto the body electronic. In virtual culture, the only interesting artificial game is life, itself: that hybrid world of organic flesh that has been left behind as excess ballast when virtual reality launches into the stratosphere of cyberspace. Once in a while, virtual bodies that have lost their way in the maze of cybernetic dungeons, and strange attractors have been known to accidentally download into the body organic, finding themselves in an eerie world of air, trees, and bio-organs breathing without technical support functions. Like amphibians struggling out of the primordial muck of ocean foam, virtualized flesh, has to learn anew the artificial game of earthly life. But it never will. It is speeding to nowhere. Recombinant History The millennium is most certainly not the “end of history” so lamented by all the conservatives, nor a period of “post-history” as trumpeted by liberal historians, but, most definitely, the beginning of recombinant history. We live, that is, at the edge of a fantastic intensification of a history that is yet to be written: the telematic history of the virtual body. It is a history marked by a double moment: its reflex, the archiving of the horizon of human experience into relational data bases; and its dynamic will, the creative recombination of our telemetried past into monstrous hybrids that will form the incisions of the electronic landscape of the twenty-first century. While the “end of history” thesis had use-value as an explanation for the fading role of ideology in the twilight days of the Cold War, and the perspective of “post-history” expressed insightfully the eclipse of the referential illusion of modernist history, recombinant history is the telematic future of virtualized flesh. Here, the (virtual) history file compresses the electronic body into a universal digital archive, always available for sampling, triggered by system operators at its XY axis, and indefinitely recombined into hybrid images of the telematic future. No longer localized in bounded energy fields, virtual history is finally free to produce recombinant images of life once the organic body has been fitted with a customized nervous system. Expressing perfectly the ruling mentality of the virtual class, recombinant history archives the human condition in the form of its smallest elementary data particles, and then, as Data philosophizes in Star Trek, “reassembles the body as a machine.” Pushed from behind by the will to (data) archivalism and pulled from ahead by the will to recombination, virtual history recounts how electronic flesh comes to full self-consciousness, how the digital body becomes aware of its abandonment of the drag-weight of skin as it synchs smoothly with its bio-machine interfaces. The virtual sex archive beckons to us from the welcoming shore of a third sex, a floating sexual screen where gender signs go to ground, as the electronic body flips into the non-space of the ecstasy of anamorphosis. The electronic body archive scans the future of organs without a body, perfectly fibrillated and hyper-charged for nomadic journeys across the media-net. The military-entertainment archive seduces it with its telematic vision of a logistics of perception, so precise in its greenish thermal infra-imaging that data becomes the only battleground: the event-horizon of the war machine as the indispensable entertainment conglomerate for virtualized flesh. In recombinant history, archiving is always on its way to recombination into a new configuration. Electronic bodies merge: the consumer body is a war machine; the medicalized body has its financial history stored in the spooling gateways of hospital computers, waiting to be leeched (recombined) of the weight of its earthly possessions; and the celebrity body is a dead star, which, like the luminous brilliance of a “red dwarf,” is understandable only by the rules of deep space astronomy. Just when we thought that history as a grand récit had finally died as the last victim of the modernist illusion of misplaced virtuality, suddenly it returns in full recombinant force: that point where history merges with digital technology, becoming the world-historical process animating the will to virtuality.