# 1NC---Round 6

## K

### 1NC---Racial Capitalism K

**The world is structured by the World Computer, an apparatus of racial capitalism that uses algorithmic techniques to commodify life. Information is produced through real abstraction that codify race, gender, and sexuality – that information structures productive thought to create value for capitalism.**

**Beller 21** (Jonathan Beller = Professor of Humanities and Media Studies and Critical and Visual Studies at Pratt Institute, “*The World Computer: Derivative Conditions of Racial Capitalism”*, Duke University Press, BEH)

Information as Real Abstraction Taking the **notion that Capital was always a computer as a starting point** (Dyer-Witheford, 2013), The World Computer understands the **history of the commodification** of life as a process of encrypting the world’s myriad qualities as quantities. Formal and informal techniques, from double-entry bookkeeping and racialization, **to the rise of information and discrete state machines**, imposed **and extended the tyranny of racial capital’s relentless calculus of profit.** By means of the **coercive colonization of almost all social spaces, categories, and representations**—where **today language, image, music, and communication all depend upon a computational substrate** that is an outgrowth of fixed capital—all, or nearly all, expressivity has been captured in the dialectic of massive capital accumulation on the one side and radical dispossession on the other. **Currently the money-likeness of expression**—**visible as “likes”** and in other attention metrics that treat attention and affect as currency—is symptomatic of the financialization of daily life (Martin, 2015a). **All expression,** no matter what its valence, **is conscripted by algorithms of profit** that intensify **inequality by being put in the service of racial capitalism**; consequently, we are experiencing a near- apocalyptic, world-scale failure to be able to address global crises including migration for reparations, carceral systems, genocide, militarism, climate racism, racism, pandemic, anti-Blackness, extinction, and other geopolitical ills. The colonization of semiotics by racial capital has rendered **all “democratic” modes of governance outmoded** save those designed for the violent purpose of extracting profits for the enfranchised. Culturally these modes of extraction take the form of fractal fascism. An **understanding that informationalized semiotic practices** function as financial derivatives may **allow for a reimagining of the relationship between** language, visuality, and that other economic medium, namely **money, in an attempt to reprogram economy** and therefore the creation and distribution of value**—and thus also the politics and potentials of representation.** In what would amount to an end to postmodernism understood as the cultural logic of late capitalism, our revolutionary politics require, as did the communisms of the early twentieth century, a new type of economic program. In the age of computation, putting political economy back on the table implies a reprogramming of our cultural logics as economic media for the radical redress of the ills of exploitation and the democratization of the distribution of the world social product. **Sustainable communism requires the decolonizaton of abstraction** and the remaking of the protocols of social practice that give rise to real abstraction. **Though in this section we will more narrowly address the issues of money, race, and information as “real abstraction,” and their role in computational racial capitalism**, we note the overarching argument for the larger study: **1 Commodification inaugurates the global transformation** of qualities into quantities and gives rise to the world computer. **2 “Information” is not a naturally occurring** reality but emerges in the footprint of price and is always a means to posit the price of a possible or actual product. 3 **The general formula for capita**l, M-C-Mʹ, where M is money, C is commodity, and Mʹ is more money) can be **rewritten M-I-Mʹ,** where I is information. 4 “Labor,” Attention, Cognition, Metabolism, **Life converge as “Informatic Labor” whose purpose,** with respect to Capital, **is to create state changes in the Universal Turing Machine** that is the World Computer— racial capital’s relentless, granular, and planetary computation of its accounts**. 5 Semiotics, representation, and categories of social difference** function as financial derivatives—as wagers on the economic value of their underliers and as means of structuring risk for capital. 6 **Only a direct engagement with the computational colonization** of the life-world through a reprogramming (remaking) of the material processes of abstraction that constitute real abstraction can secure victory—in the form of a definitive step out of and away from racial capitalism—for the progressive movements of our times. Such a definitive movement requires an occupation and decolonization of information, and therefore of computation, and therefore of money. Only through a remaking of social relations at the molecular level of their calculus, informed by struggle against oppression, can the beauty of living and the fugitive legacies of creativity, community, and care prevail. The mode of comprehension, analysis, and transformation proposed here will require an expanded notion of racial capitalism. It interrogates the existence of deep continuities and long-term emergences—what one could correctly call algorithms of extractive violence—in the history of capitalism. These algorithms of violence include the reading and writing of code(s) on bodies, their surveillance and overcoding by informatic abstraction. Such algorithms of epidermalization or “the imposition of race on the body” (Browne: 113) are inscribed and executed on the flesh (Spillers 1987); and they are executed by means of codification processes that violently impose both a metaphysical and physical reformatting of bodies. As Simone Browne shows, epidermalization is given “its alphanumeric form” (99) through a vast array tools of marking, scarification, discipline, and surveillance that include branding irons, implements of torture, auction blocks, ship design, insurance policies, newspaper ads for runaway “property,” photographs in postcard form and a panoply of other media of dehumanization. Executable code is imposed as social categories of race, gender, religion and property, as ideologies, psychologies, contracts, brands, communication theories, game theories, and quantities of money—these abstractions work their ways into and are indeed imposed by the machines of calculation—and their avatars. We confront a continuous process of unmaking and remaking using all means available; it is violently inscribed on bodies. Sylvia Wynter, in her post– Rodney King piece “No Humans Involved: An Open Letter to My Colleagues” writes, “Both W. E. B. Du Bois and Elsa Goveia have emphasized the way in which the code of ‘Race’ or the Color Line, functions to systemically predetermine the sharply unequal re-distribution of the collectively produced global resources; and therefore, the correlation of the racial ranking rule with the Rich/Poor rule. Goveia pointed out **that all American societies are integrated on the basis of a central cultural belief** in which all share. This belief, that of **the genetic-racial inferiority** of Black people to all others, functions to enable our social hierarchies, including those of rich and poor determined directly by the economic system, to be perceived as having been as pre-determined by ‘that great crap game called life,’ as have also ostensibly been the invariant hierarchy between White and Black. Consequently in the Caribbean and Latin America, within the terms of this sociosymbolic calculus, to be ‘rich’ was also to be ‘White,’ to be poor was also to be ‘Black’ ” (Wynter: 52). “To be ‘rich’ was also to be ‘White,’ to be poor was also to be ‘Black.’ ” The real abstraction imposed by executable code—the “**code of ‘Race’ ” that “functions to systematically predetermine** the structurally **unequal redistribution of global resources**” is beholden to mediating capitalist exchange while embarking on a radical reformatting of ontology. This reformatting, the supposed result of “that great crap game called life,” brutally correlates race and value, but not entirely by chance, while racial capitalism embarks on imposing this calculus globally. Racial abstraction is endemic to what we will further explore as “real abstraction”; the evacuation of quality by abstract categories and quantities is, as we shall see in more detail, a “necessary” correlate to a world overrun by the calculus of money. Such algorithms of violence encode social difference, and although they may begin as heuristics (“rules of thumb”), they are none the less crucial to the **calculated and calculating expansion of racial capital**. Its processes and processing structures the meanings that can be ascribed to— and, as importantly, what can be done to—those of us whose data profiles constitute us as “illegal,” “Mexican,” “Black,” “[Roma] Gypsy,” “Jew,” and a lexicon of thousands of other actionable signs. This codification process draws from the histories of slavery, of colonialism, of state formation, of genocide, of gender oppression, of religious pogroms, of normativity, and again from the militarization and policing and the apparatuses of calculation that have developed within states and parastates in their own biometric pursuit of capital—power. Their violent destruction and remaking of the world. The **internalization of these codes**, including the struggles with them and the ways in which they license and/or foreclose various actions, exists in a recursive relationship to their perilous refinement. **Their analysis, a code-breaking of sorts,** will therefore demand some drastic modifications in many of the various anticapitalist, antistate warrior-stances practiced to date, particularly in a large number of their European and U.S. incarnations that until very recently remained blind to their own imperial violence and are too often complicit with hegemonic codes of masculine, unraced agency, imperialist nationalism, and default liberal assumptions in relation to questions of race, gender, sexuality, coloniality, and other forms of historically institutionalized oppression.3 The analytic, **computational racial capital, would identify the field of operations** that emerges around the embryonic form of the commodity and coarticulates with racial abstraction to formalize its code, code **that serves as operating system for the virtual machine here hypostasized as “the world computer”** and by inscribing itself on bodies and everything else. The commodity, the analysis of which famously begins volume 1 of Marx’s Capital, expressed the dual being and indeed dual registration of the humanly informed object as both quality of matter and quantity of exchange-value, along with the global generalization of this form. “The wealth of societies in which the capitalist mode of production prevails appears as an immense collection of commodities” (125). Commodities were (and with some modifications to be discussed further on, still are) humanly informed materials with a **use-value and an exchange-value— humanly informed qualities indexed by quantities**. “Computational racial capital,” as a heuristic device, stages an analysis of the convergence of what on the one side often appeared as universal: **the economic, abstract, and machinic operating systems of global production** and reproduction endemic to the commodity form and its calculus, with what on another side, sometimes appeared as particular or even incidental: racism, colonialism, slavery, imperialism, and racialization. The concept organizes this dramaturgy of analytically reunifying elements that were never materially separate in light of the study that the late Cedric Robinson conducted and recorded as Black Marxism. Robinson writes, “The development, organization and expansion of capitalist society pursued essentially racial directions, so too did social ideology. As a material force, then, it could be expected that racialism would inevitably permeate the social structures emergent from capitalism. I have used the term ‘racial capitalism’ to refer to the development and to the subsequent structure as an historical agency” (1983: 2–3). The World Computer takes what Robinson saw as “civilizational racism,” and its central role in the development of capital as axiomatic,—and sees that this role extends to and deeply into capitalist calculation and machinery during the entire period in which the world economic system seems to have moved form the paradigm of the commodity to a paradigm of information. “**Computational racial capitalism” would** **thus understand the generalization of computation** as an extension of capital logics and practices that include and indeed require the economic calculus of the dialectics of social difference. These differences, both economic and semiotic, would include those plied by slavery, anti- Blackness and other forms of racism during the past centuries. Computation must **therefore be recognized** as not a mere technical emergence but the **practical result of an ongoing and bloody struggle** between the would-have- it-alls and the to-be-dispossessed. Developed both consciously and unconsciously, computational racial capitalism is, when seen in the light of ongoing racialization and value extraction, “the subsequent structure as an historical agency.” The racial logic of computation must be pursued when considering finance, surveillance, population management, policing, social systems, social media, or any of the vast suite of protocols plying difference for capital. The local instance of computation, a specific 1 or 0, may seem value neutral, a matter as indifferent as lead for a bullet or uranium for a bomb. But we are looking at computation as the modality of a world- system. Computation emerges as **the result of struggles that informed “class struggle**” in all its forms, recognized or not by the often spotty tradition(s) of Marxism, including those struggles specific to the antagonisms of colonialism, slavery, imperialism, and white supremacist heteropatriarchal capitalism more generally. It is the result of struggles indexed by race, gender, sexuality, nationality, and ethnicity, along with additional terms indexing social differentiation too numerous to incant here but that together form a lexicon and a grammar of extractive oppression—and as we have said and as must always be remembered, also of struggle. The lexicon includes compressions that result in many of history’s abstractions including a perhaps singularly pointed abstraction: “a history whose shorthand is race” (Spillers 1997: 142). The grammar for that lexicon depends upon the deployment and execution of forms of differentiating abstraction that are lived—lived processes of abstraction and lived abstraction organized by the increasingly complex and variegated calculus of profit and thus of domination. “**Real abstraction,”** then**, emerges** not just as money in Sohn-Rethel’s sense, but **as the codification of race, gender, sexuality, geography, credit and time**—and gives rise to a “grammar,” in Hortense Spillers’s (1987) use of the term, that not only structures meaning and redounds to the deepest crevices of being smelted by social practices, but also, and not incidentally, prices differentials indexed to social difference.4 “Real abstraction,” as Sohn-Rethel spent his life deciphering, takes place “behind [our] backs” as the practical and historical working out of the exchange of equivalents within the process of the exchange of goods (33). For him, the development of the money-form, of the real abstraction that is money, is Exhibit A of the abstraction process mediating object exchange. This capacity for abstraction, realized first in “the money commodity” and then as money provided the template for further abstraction, not least in the conceptual formations of Western philosophy itself (1978). Sohn-Rethel develops this argument that practices of exchange precede the abstraction of value in Intellectual and Manual Labour, providing the full quotation from Marx: “Men do not therefore bring the product of their labour into relation with each other as value because they see these objects merely as the material integuments of homogeneous human labour. The reverse is true: by equating their different products to each other in exchange as values, they equate their different kinds of labour as human labour. They do this without being aware of it. (Marx 1990: 166 in Sohn-Rethel 1978: 32). Here is Sohn- Rethel’s commentary: People become aware of the exchange abstraction only when they come face to face with the result which their own actions have engendered “behind their backs” as Marx says. In **money the exchange abstraction achieves concentrated representation**, but a mere functional one— embodied in a coin. It is not recognizable in its true identity as abstract form, but disguised as a thing one carries about in one’s pocket, hands out to others, or receives from them. Marx says explicitly that the value abstraction never assumes a representation as such, since the only expression it ever finds is the equation of one commodity with the use- value of another. The gold or silver or other matter which lends to money its palpable and visible body is merely a metaphor of the value abstraction it embodies, not this abstraction itself. (33–34) Exchange-value is “in our heads” but is not the creation of any individual. Alongside use-value it is the other, abstract component of the “double being” of the commodity-form. Like Norbert Wiener’s (1961: 132) definition of information but, strictly speaking, emerging long before the idea of information proper, real abstraction is “not matter or energy.” There is not an atom of matter in exchange-value, or, as Marx puts it, “Not an atom of matter enters into the objectivity of commodities as values; in this it is the direct opposite of the coarsely sensuous objectivity of commodities as physical objects” (1990: 138). And a bit on, “So far no chemist has ever discovered exchange-value in a pearl or diamond” (177). But unlike in Wiener’s naturalist definition of information, exchange-value is an index of a social relation, an historical outcome. It indexes “abstract universal labor time,” a third term that forms the basis of comparison between two ostensibly incomparable and therefore incommensurable commodities, and, because common to both, creates the ratio of value that renders them quantitatively commensurable. **This distinction between the social basis of exchange-value and the universal character** of information should give us pause. As we shall have occasion to observe, information, as it is today (mis)understood, is thought to be a naturally occurring additional property of things—neither matter nor energy—rather than a domain of expression constituted by means of a technological and economic repression of its social dimension. Notably, Sohn-Rethel “set[s] out to argue that the **abstractness operating in exchange and reflected in value does nevertheless find an identical expression**, namely the abstract intellect, or the so-called pure understanding—the cognitive source of scientific knowledge” (34). For him, it gives rise to the abstract capacities of the subject of philosophy as well as the quantitative capacities of the subject of science and mathematics that in the twentieth century move toward a paradigm of information. Echoing Sohn-Rethel, we could say then that information is in our machines but not the creation of any individual machine. Not an atom of matter enters into information, though, like value, it is platformed on matter and requires energy for creation. This thesis will take on particular importance as we consider social differences whose descriptors, it turns out, are executable in a computational sense, at least from the point of view of financial calculus, but platformed on matter, and indeed, on living matter, on life. Beyond the intention of any individual, abstraction as “exchange-value” in “money” occurs in and as the process and processing of exchange in accord with an emerging standard. This standard, which economists call “exchange-value,” and which, in Marx is based on abstract universal labor time (the historically variable, socially necessary average time required to produce a commodity), persists alongside and within the specific qualities of the commodity (its use-value) and creates the commodity’s dual being. Though without chemical or material basis, **this standard, exchange-value, is a social relation**—a social relation as an abstraction—that inheres in the commodity-form itself and is formalized with the rise of the money commodity. The money commodity, in becoming a general equivalent, standardizes and thus renders fully quantifiable the exchange-value of commodities—exchange-values denominated in quantities of money. The quantification of value in a measure of money is an abstraction enabled by money itself which, as we have seen, is a real abstraction. It is a calculation that has occurred behind our backs, and indeed produces what Hayek (1945) identifies as the price system. When we recognize the differences in wages among people who are raced, gendered, nationed, and classed by various matrices of valuation, we also recognize that the calculus performed by and as real abstraction includes racial abstraction and gender abstraction. It is part of the calculus of **capital that provides it with an account of and discounts on the rate of exchange** with the labor power of marked people(s) —by discounting people(s) (Beller 2017b; see also Bhandar and Toscano 2015: 8–17). Racial abstraction provides capital with an index that measures a deviation from the average value of human life (itself historically driven down by the falling rate of profit). In this, computational racial capitalism is not merely a heuristic or a metaphor for the processes of a virtual machine; it is a historical-material condition. As we shall see, and as is obvious at least in the general case to anyone who has thought seriously about it, whiteness (and the fascist masculinity endemic to it) is not only operating where one finds “race”: it is operating everywhere in the imperium that it can be imagined (by some) that race is not a factor—**in medicine, in science, in statistics, in computation, in information**. As I wrote—resituating Bateson’s (1972) definition of information—in The Message Is Murder, **information is not merely “a difference that makes a difference”; it is a difference that makes a social difference**. **This slight difference in expression situates information historically.** While in keeping with Bateson’s far reaching ideas regarding an ecology of mind **(“If I am right, the whole thinking about what we are and what other people are has got to be restructured”;** 468), ideas that at **once problematize any distinction between inside and outside** and that make him dubious of any thought that presupposes sovereign subjectivity, my interpolation of “social” in his formulation “a difference that makes a social difference” **shifts the emphasis somewhat by insisting on the always already sociohistoricity** of any possible knowledge. Bateson believed that his understanding of information and systems ecology promised a new mode of thinking that he himself, as a twentieth-century bourgeois white man, did not feel capable of really embodying. Thus our interpolation, in keeping with Bateson but made compatible with Marx is, in keeping with Marx, designed to “transform ... the problem of knowledge into one of social theory” (Postone 2003: 216). Such a transformation **situates knowledge and now also information in the sociohistorical milieu**, the ecology such that it is, of racial capitalism, and therein finds information’s historical conditions of possibility. Here we advance the argument for the ultimately determining instance of social difference (and up the ante for the bet against whiteness) by **proposing that information is the elaboration of real abstraction**, of abstraction that results from collective practices of economic exchange and therefore from the general management of value as a social relation. I argue that set out in logical sequence, information is posited by, then posits and then presupposes the human processes of exchange that Sohn-Rethel, following Marx, argues are the practices that first give rise to the money- form and to real abstraction. For Sohn-Rethel the result of the activities of comparison, adequation, and trading of specific things that have qualities— which are, strictly speaking, incomparable—resulted over time in a process of finding a relation of equivalence and then general equivalence indexed to abstract labor time, what was in effect socially average human labor time. Exchange-value was a quantitative measure of that abstract time—the average socially necessary time to create commodity X denominated in money. This real abstraction was no one’s invention but was the practical result of exchange—of people’s activity—and thus emerged as a nonconscious result that nonetheless interceded on conscious process. Consequently, real abstraction was for Sohn-Rethel also the precursor to conceptual abstraction, including philosophy, science and mathematics. He writes: **The essence of commodity abstraction, however, is that it is not thought-induced**; it does not originate in ~~men’s~~(people’s) minds but in their actions. And yet this **does not give “abstraction” a merely metaphorical meaning. It is abstraction in its precise, literal sense.** The economic concept of value resulting from it is characterized by a complete absence of quality, a differentiation purely by quantity and by applicability to every kind of commodity and service which can occur on the market. These qualities of the economic value abstraction indeed display a striking similarity with fundamental categories of quantifying natural science without, admittedly, the slightest inner relationship between these heterogeneous spheres being as yet recognizable. While **the concepts of natural science are thought abstractions, the economic concept of value is a real one**. It exists nowhere other than in the human mind but it does not spring from it. Rather it is purely social in character, arising in the spatio-temporal sphere of human interrelations. It is not people who originate these abstractions but their actions. “They do this without being aware of it.”5 The practical rise of a form of abstraction indifferent to particular qualities is key here and is to be understood as a precursor to the content- indifferent abstractions of a variety of types. As Simmel notes in The Philosophy of Money, law, intellectuality, and money “have the power to lay down forms and directions to which they are content indifferent” (441–2). Without doubt, such power informed the racial categories of the Humanism of Ernst Renan, Roger Caillois, and others so brilliantly excoriated by Aimé Césaire in his Discourse on Colonialism. We add here the hypothesis that **the rise of information as the content-indifferent assignation of numerical index to any social relation** whatever, is a development of the abstraction necessary for economic exchange to persist under the intensive “developmental” pressure of global racial capitalism—information is derived from the increasingly complex things that people do through and as exchange and as such is both precursor and corollary to financialization— **the social conditions that sustain what is fetishistically apprehended as “finance capital”** and its seeming capacity to derive wealth from pure speculation and risk management in ways that (incorrectly) appear to be fully detached from labor and labor time. In this light, information reveals itself as **neither naturally occurring nor the creation of anyone in particular**, but, in keeping with Sohn-Rethel’s Marxian formulation of real abstraction, is likewise invented “**behind our backs” as a result of ~~“man’s”~~ “People’s” practical activity**. Information enables a complexification and further generalization of what will turn out to be monetary media, media that would be adequate to, and indeed are adequate (from the perspective of capital) to contemporary forms of exchange—what people do when they interact with one another in what is now the social factory. In brief, information is the extension of a monetary **calculus adequate to the increasingly abstract character of social relations and social exigencies**. It is an interstitial, materially platformed, calculative fabric of abstraction that through its coordinated capillary actions orchestrates social practice and provides interface for the uptake of value production. Once this idea is fully grasped, it becomes pointless to look for any other origin to the information age. Just as for Marx there is not a single atom of matter in exchange value (1990: 138), we say that there is not a single atom of matter in information.6 “All the phenomenon of the universe, whether produced by the hand of man or indeed by the universal laws of physics, are not to be conceived as acts of creation but solely as a reordering of matter” (Pietro Verri 1771, cited in Marx 1990: 133; note 13). Value is the socially valid informing of matter, so too is information. Economy then is society’s matter compiler and, approximately simultaneously with the advent of “man,” “history,” and “the world market,” “exchange value” emerges as a quantitative measure of the social value of material state changes indexed to human labour posited as “abstract universal labour time.” Marx’s famous example of the simple wooden table in Chapter 1 of Capital, which “transcends sensuousness” when leaving the clear-cut framework of use value and becoming a commodity and thus an exchange value, registers as “fetishism,” the “metaphysical subtleties,” “theological niceties,” and “grotesque ideas” (1990: 163), endemic in the table’s computability as value. In brief, just as **discreet states of matter embodying value as a network of commodities** mediated by markets and tied to labor give rise historically to the discrete state machine, otherwise known as the computer, exchange value gives rise to computable information and then to computation itself, becoming interoperable with it. Even before the rise of information proper, **exchange value operates as information** (and thus, necessarily information processing) —and then, as synthetic finance and contemporary forms of computer- mediated accounting and production readily testify, by means of it. Computation is the extension, development, **and formalization of the calculus of exchange value**—the ramification of its fetish character—and becomes in spirit and in practice, a **command control layer for the management of the profitable calculus of value**. Platformed on states of matter, information, not matter but rather difference between and among states of matter, extends, grammartizes, and granularizes the calculus of value regarding the organization of matter. **Commodities and computation thus run the same basic operating system**—state changes in matter driven by human practices—the value of which in any given state is expressed in the context of an informatic network and indexed to labor time. As such, information is the processing power of money itself and is inexorably beholden to abstract labor time and thus to racial capitalism. It is, in brief, an outgrowth of the money form. The cost of computation, the **arrival at a discrete state, is a derivative operation**, indicating an investment, that is explicitly a risk on the future value of an underlier, that is, on value itself. This argument for understanding the social as the ultimate referent and ground for any and all information, further advanced in chapter 1, is not content to serve **as a mere heuristic for cultural theorists to express a modicum of suspicion** with respect to truth claims backed by statistics and information. It is a **thoroughgoing indictment of information as a technique of value extraction**, racialization, and instrumental social differentiation. As a first approximation, actually existing information, like actually existing money, can indeed be said to be the root of all evil—in as much as the fact of its existence is a symptom of a far more complex historical process than what would seem to be discernible from the fact of the coin or the bit. The problem, of course, is that your metabolism (and mine), cannot easily extend into the future without access to both. I develop this idea here to say that everywhere computation operates, so too does racial capitalism—at least until proven otherwise. The repressive apparatus of capital clearly assumes this role for information, even if it does so at a level that most often exceeds ordinary default “human” (white) understanding: **the net result to date of the number crunch of “the world computer**” is a hierarchy of valuations inseparable from the violence of racialization and its attendant dispossession, and inseparable again from what Ruth Wilson Gilmore (2007: 28) in her classic and statistically attuned definition of racism calls “the state-sanctioned or extralegal production and exploitation of group- differentiated vulnerability to premature death.” Today, we argue, no calculation**, networked as it is with the world computer, is fully separable from informatics and its basis in racial capitalism.** We will argue for this logical and also horrific history of abstraction in more detail below as we explore the interoperability of digital systems and their colonization of the semiotic, corporeal and material domains. The global learning curve of revolutionary praxis must attend to this modal innovation of systemic oppression, an oppression which is at once beyond all calculation and one with it.7

#### ICT development is dependent on anti-Black labor practices, material extraction, and environmental destruction.

Noble 16, assistant professor in the Department of Information Studies in the Graduate School of Education and Information Studies at UCLA. (Safiya Umoja, 2016, “A Future for Intersectional Black Feminist Technology Studies”, *Socialist & Feminist Online*, Issue 13.3-14.1, <https://sfonline.barnard.edu/traversing-technologies/safiya-umoja-noble-a-future-for-intersectional-black-feminist-technology-studies/>, accessed 8/26/2021)

\*\*\*note – underlined portion of the card has mention to sexual assault, it will not be highlighted.

The New Scramble for Africa: An Intersectional Analysis of the IT Sector

In the new scramble for Africa’s resources, transnational information and communication industries are racing to control the minerals and land needed for their aggressive expansion and growth—an echo of earlier colonial pursuits by European nations looking to open new markets for cotton and revitalize depressed Western economies.[20] Neocolonial processes remain intact, particularly in places like the Democratic Republic of Congo. That nation’s history of Western plunder began a century and a half earlier, under the rule of King Leopold II of Belgium, when its rubber and ivory resources were extracted for the manufacture of tires and condoms destined for the sprawling automobile and leisure culture of the United States.[21]

Efforts to reclaim autonomy over the Congo and its natural-resource riches were led in part by the pan-Africanist Patrice Lumumba, whose opposition to Belgian and US control of the Congo resulted in his assassination in 1961. This was but one of many efforts to subdue and effectively put down Black liberation movements on the continent of Africa. The foreclosing of African anti-colonial movements by Western state powers was mirrored in the US government’s simultaneously enacted Counter Intelligence Program (COINTELPRO), which systematically assassinated and jailed Black feminist and Black Power liberation and civil rights movement activists in the US from the 1960s to the 1980s. Many of these same strategies are being re-enacted in this historical moment under the USA Patriot Act. The North American activists targeted by COINTELPRO were seeking liberation from interlocking oppressions, and developed relationships of solidarity and mutual aid with many pan-Africanist movements. Since the 1940s, pan-Africanists had been actively engaging in conferences and knowledge production designed to unify the interests of oppressed peoples directly affected by imperialist projects around the globe. This is an important intellectual lineage from which intersectional feminist critiques and activism emerged, their origins evident in the statement issued in 1945 from the Fifth Pan-African Conference:

We condemn the monopoly of capital and the rule of private wealth and industry for profit alone. We welcome economic democracy as the only real democracy. Therefore we shall complain, appeal and we will make the world listen to the facts of our condition. We will fight every way we can for freedom, democracy and social betterment.[22]

These intellectual linkages of critique and resistance demonstrate the connection between colonial projects of the past to the neocolonial, transnational, and neoliberal projects of the contemporary moment. Indeed, the neocolonial projects that fuel extraction industries (and their concomitant environmental and human catastrophes) in places like the Congo today persist in a historical trajectory of global capital’s thirst for expansion at the expense of Black life. Pádraig Carmody details the colonial quest for rubber and ivory in the Congo that led to the slaughter of more than ten million people; Carmody estimates that another three to five million were killed from 1983 to 2003 in wars over minerals and the control of coltan.[23] Coltan, short for columbite-tantalite, is a mineral, more potent than steel which is needed for computers and electronics to release electrical charges in small capacitors.[24] Contemporary global communications infrastructure, including the internet and the billions of devices, appliances, electronics, and “things” connected to it, could not exist without cheap access to coltan. Nevertheless, the bloody “conflict mineral” wars over its control—the rape, violence, and loss of human life involved—are largely invisible byproducts to digital tech users in the West.

In the networked economy of resources needed for global communications infrastructure, Black lives are engaged in some of the most treacherous labor essential to the growth and proliferation of the internet. Capital’s organization in multi-tiered global supply chains[25] obfuscates the direct relationships between Black labor, child labor, civil war, rape, and a smartphone, laptop, or iPad. Electronics companies such as Google, Apple, Dell, Intel, Sony, Nokia, and Ericsson are heavily invested in the computer and electronics hardware manufacturing industries and need raw minerals such as coltan to produce components such as tantalum capacitors for microprocessor chips. But this labor is outsourced, and thus conveniently out of sight and out of mind, going to low-bidders who provide the cheapest labor under favorable neoliberal economic policies. These practices are consistent with other forms of racialized and outsourced internet labor, such as commercial content moderation for large internet companies.[26]

In a transnational and neoliberal context, such practices are not limited to sites located geographically outside the West. David Pellow and Lisa Sun-Hee Park have written a comprehensive study of the underside of Silicon Valley—touted as a panacea of innovation, wealth, and opportunity, when this is the reality only for a choice few.[27] Just as in other areas of the globe, the technology and communications industries headquartered in Silicon Valley achieve their capital accumulation at the expense of overuse and abuse of the environment, gross poverty, and health degradation as they rely on an invisible labor force of immigrants and others living in the transnational, racialized margins:

Power, privilege and wealth are relational, which often means that one person’s riches and leisure time are derived from another’s impoverishment and hard labor; one’s socioeconomic or racial/ethnic group’s access to safe, high-salary jobs and clean neighborhoods is frequently linked to another group’s relegation to dangerous, low-wage occupations and environmentally contaminated communities. This is the essence of environmental racism and environmental injustice: ecological policies and practices are characterized by unfair treatment, discrimination, and oppression.[28]

Intersectional analysis makes these relational elements visible and allows us to trace the connections forged by inequities of wealth and power that bind local communities to others around the globe. Taking an intersectional approach to the internet and its infrastructure bridges the African diaspora, to help us see where and how oppressions are operationalized in similar ways and in the service of shared agents or shared motivations. The internet and its infrastructure are implicated in cases such as the recent public health crisis in Flint, Michigan, where state and corporate abuses, in the interest of multinational companies heavily invested in the technology sector, resulted in poisoned water supplies. The web is functioning as a site of online hyper-surveillance and trolling of Black activists engaged in the #BlackLivesMatter movement in the US and beyond. It is fundamental to Wall Street, where, through the mortgage crisis and Great Recession of 2008, information technology and the gamification of financial markets led to the largest decimation of Black wealth in the history of the United States. It is central to the oppressive working conditions facing Congolese laborers engaged in mineral extraction, in mineral wars, and in creating the greatest site of sexual violence in the world, according to the United Nations. It is evident in the toxic waste sites on the west coast of Africa, in Ghana, where e-waste is shipped in from the West and dumped, poisoning land, water, people, and environments.

These connections need to be made in order to understand the tradeoffs and true costs that come with the overemphasis, financially and in policy, on digital technologies and internet infrastructures. Communications scholar Robert Mejia has critiqued the multiple ways in which electronics and communications devices and infrastructures have material consequences with potent environmental impacts. He notes:

it is imperative that media and cultural studies scholars offer an account of how the 3.7 million gallons of water used per day by Intel in Hillsboro, Oregon, and the millions more used elsewhere, contribute to an ecology hospitable to infectious disease and its natural reservoirs… Knowing that an estimated 632,000 pounds of mercury were disposed of in United States’ landfills between 1997 and 2007, from just discarded personal computers alone, and that about 130 million cellphones are thrown away each year.[29]

The consequences of these ecological disasters are not equitably applied to everyone. The study of the materiality of the internet includes thinking through the specific contexts of who is affected by the social, environmental, economic, and policy arrangements of the digital.[30]

Intellectual investments in thinking of the internet and the digital as disembodied and ephemeral—as if they have no materiality—come at a great cost of erasure and denial. Jean-François Blanchette has written one of the most detailed critical accounts of the development of computing—including the ways in which information is processed, networks are developed and managed, and fiber infrastructure is built and maintained—in order to dislodge the idea that the internet and computing are immaterial or abstract.[31] An intersectional examination of the global information infrastructure underscores that it is predicated upon a complex, globalized, and fundamentally material economy of resource extraction and human labor, from Congolese labor to extract minerals, to Chinese labor working for poverty wages at Foxconn to make Apple’s iPhones, to the exclusion of African American labor from high-wage IT jobs in the United States, to Ghanaians sifting through electronic trash and toxic waste.

#### The new “cold war” battle for tech supremacy with China is a race manufactured to cover up US digital colonialism — only movements against capitalism can reign in US imperialism and prevent the aff’s impact.

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A Chinese or US digital empire?

In the West, there is a lot of chatter about “a new Cold War,” with the US and China battling it out for global technological supremacy. Yet, a close look at the tech ecosystem shows that US corporations are overwhelmingly dominant in the global economy.

China, after decades of high growth, generates around 17 percent of global GDP and is predicted to overtake the US by 2028, feeding into claims that American empire is on the decline (a narrative that was previously popular with the rise of Japan). When measuring the Chinese economy by purchasing power parity, it is already larger than the US. However, as economist Sean Starrs points out, this wrongly treats states as self-contained units, “interacting as billiard balls on a table.” In reality, Starrs contends, American economic dominance “hasn’t declined, it globalized.” This is particularly true when looking at Big Tech.

In the post-WWII period, corporate production was spread across transnational production networks. For instance, in the 1990s, companies like Apple began outsourcing electronics manufacturing from the US to China and Taiwan, exploiting sweatshop workers employed by companies like Foxconn. US tech transnationals often design the IP for, say, high-performance router switches (e.g. Cisco) while outsourcing manufacturing capacity to hardware manufacturers in the South.

Starrs profiled the world’s top 2,000 publicly traded companies, as ranked by Forbes Global 2000, and organized them according to 25 sectors, showing the dominance of US transnationals. As of 2013, they dominated in terms of profit shares in 18 of the top 25 sectors. In his forthcoming book American Power Globalized: Rethinking National Power in the Age of Globalization, Starrs shows that the US remains dominant. For IT Software & Services, US profit share is 76 percent versus China’s 10 percent; for Technology Hardware & Equipment, it is 63 percent for the US versus 6 percent for China, and for Electronics, it is 43 and 10 percent, respectively. Other countries, such as South Korea, Japan and Taiwan, often fare better than China in these categories as well.

Portraying the US and China as equal contenders in the battle for global tech supremacy, as is often done, is therefore highly misleading. For example, a 2019 United Nations “Digital Economy” report states that: “Geography of the digital economy is highly concentrated in two countries” — the United States and China. But the report not only ignores factors identified by authors like Starrs it also fails to account for the fact that most of China’s tech industry is dominant inside China, save a handful of major products and services, such as 5G (Huawei), CCTV cameras (Hikvision, Dahua), and social media (TikTok), which also hold large market shares abroad. China also has substantial investments in some foreign tech firms, but this hardly suggests a genuine threat to the dominance of the US, which has a much larger share of foreign investments as well.

In reality, the US is the supreme tech empire. Outside of US and Chinese borders, the US leads in the categories of search engines (Google); web browsers (Google Chrome, Apple Safari); smartphone and tablet operating systems (Google Android, Apple iOS); desktop and laptop operating systems (Microsoft Windows, macOS); office software (Microsoft Office, Google G Suite, Apple iWork); cloud infrastructure and services (Amazon, Microsoft, Google, IBM); social networking platforms (Facebook, Twitter); transportation (Uber, Lyft); business networking (Microsoft LinkedIn); streaming entertainment (Google YouTube, Netflix, Hulu), and online advertising (Google, Facebook) — among others.

The upshot is, whether you are an individual or a business, if you are using a computer, American companies benefit the most. They own the digital ecosystem.

Political domination and the means of violence

The economic power of US tech giants goes hand-in-hand with their influence in the political and social spheres. As with other industries, there is a revolving door between tech executives and the US government, and tech corporations and business alliances spend a great deal lobbying regulators for policies favorable to their specific interests — and digital capitalism in general.

Governments and law enforcement agencies, in turn, form partnerships with tech giants to do their dirty work. In 2013, Edward Snowden famously revealed that Microsoft, Yahoo, Google, Facebook, PalTalk, YouTube, Skype, AOL, and Apple all shared information with the National Security Agency via the PRISM program. More revelations followed, and the world learned that data stored by corporations and transmitted over the internet is sucked into enormous government databases for exploitation by states. Countries in the South have been targets of NSA surveillance, from the Middle East to Africa and Latin America.

Police and the military also work with tech corporations, who are happy to cash fat checks as providers of surveillance products and services, including in countries across the South. For example, through its little-known Public Safety and Justice Division, Microsoft has built an extensive partnership ecosystem with “law enforcement” surveillance vendors, who run their tech on Microsoft cloud infrastructure. This includes a city-wide command-and-control surveillance platform called “Microsoft Aware” that was purchased by police in Brazil and Singapore and a police vehicle solution with facial recognition cameras that has been rolled out in Cape Town and Durban, South Africa.

Microsoft is also deeply involved with the prison industry. It offers a variety of prison software solutions that cover the entire correctional pipeline, from juvenile “offenders” to pretrial and probation, through jail and prison, as well as those released from prison and put on parole. In Africa, they partnered with a company called Netopia Solutions, which offers aPrison Management Software (PMS) platform that includes “escape management” and prisoner analytics.0

While it is not clear where exactly Netopia’s Prison Management Solution is deployed, Microsoft stated that “Netopia is [a Microsoft partner/vendor] in Morocco with a deep focus on transforming digitally, government services in North and Central Africa.” Morocco has a track record of brutalizing dissidents and torturing prisoners, and the US recently recognized its annexation of Western Sahara, in contravention of international law.

For centuries, imperial powers tested technologies to police and control their citizens on foreign populations first, from SirFrancis Galton’s pioneering work on fingerprinting applied in India and South Africa, to America’s combination of biometrics and innovations in managing statistics and data management that formed the first modern surveillance apparatus to pacify the Philippines. As historian Alfred McCoy has shown, the collection of surveillance technologies deployed in the Philippines offered a testing ground for a model which was eventually brought back to the United States for use against domestic dissidents. Microsoft and its partners’ high-tech surveillance projects suggest that Africans continue to serve as a laboratory for carceral experimentation.

Conclusion

Digital technology and information plays a central role in politics, economy, and social life everywhere. As part of the American empire project, US transnational corporations are reinventing colonialism in the South through their ownership and control of intellectual property, digital intelligence, and the means of computation. Most of the core infrastructure, industries, and functions performed by computers are the private property of American transnational corporations, who are overwhelmingly dominant outside US borders. The largest firms, such as Microsoft and Apple, dominate global supply chains as intellectual monopolies.

An unequal exchange and division of labor ensues, reinforcing dependency in the periphery while perpetuating mass immiseration and global poverty.

Instead of sharing knowledge, transferring technology, and providing the building blocks for shared global prosperity on equal terms, the rich countries and their corporations aim to protect their advantage and shake down the South for cheap labor and rent extraction. By monopolizing the core components of the digital ecosystem, pushing their tech in schools and skills training programs, and partnering with corporate and state elites in the South, Big Tech is capturing emerging markets. They will even profit from surveillance services provided to police departments and prisons, all to make a buck.

Yet against the forces of concentrated power, there are always those who push back. Resistance to Big Tech in the South has a long history, dating back to the days of international protests against IBM, Hewlett Packard, and others doing business in apartheid South Africa. In the early 2000s, Global South countries embraced Free Software and the global commons as a means to resist digital colonialism for a while, even if many of those initiatives have since faded. In the last few years, new movements against digital colonialism are emerging.

There is much more going in this picture. An ecological crisis created by capitalism is rapidly threatening to permanently destroy life on Earth, and solutions for the digital economy must intersect with environmental justice and broader struggles for equality.

To stamp out digital colonialism, we need a different conceptual framework that challenge root causes and major actors, in connection with grassroots movements willing to confront capitalism and authoritarianism, American empire, and its intellectual supporters.

#### The United States is a revisionist power. Concerns of Chinese tech dominance are rooted in orientalist Sinophobia.

**Nair 18** , founder and CEO of the Global Institute For Tomorrow (GIFT), an independent think tank based in Hong Kong. (Chandran, 12/21/2018, “Why Asia Should Be Worried By America’s Bullying of China,” *The Diplomat*, <https://thediplomat.com/2018/12/why-asia-should-be-worried-by-americas-bullying-of-china/> Date Accessed: 3/19/2021)

Imagine a scenario where a senior American business executive is suddenly detained overseas, at the behest of the Chinese government, which accuses him or her of violating its national security. American and Western media would undoubtedly express outrage and have a field day bashing China.

Yet when the equivalent happened last week with Canada’s detention of Huawei’s chief financial officer, Meng Wanzhou, on behalf of the United States, questions about the arrest’s legitimacy, or the presence of political motives behind it, were largely absent.

This is not to argue that Meng is completely innocent of breaking American law. But it is important to note that the right to this extraterritorial behavior is asymmetric: only the United States is allowed to wield it “legitimately.” No other country, such as Malaysia, which is trying to recover 1MDB-related money from Goldman Sachs, can dare to act in this way. If other nations tired of U.S. judicial bullying – and there are many – start to retaliate by detaining Americans and citizens of its Western allies, things could become very messy, very quickly.

But Meng’s arrest leads to a different question. Despite protests to the contrary, the United States made a choice to escalate tensions by taking this action. Why?

Some have connected Meng’s arrest to the wider trade tensions between China and the United States. Huawei had already been accused by Western politicians of being a front for the Chinese government, and it has been denied access to Western markets. Given that technology is one of the few areas where the West is still clearly dominant, people have viewed this pressure as strategic economic leverage.

But this misses a more fundamental cause for the worries about China, which now spread beyond trade and economics. Articles about China’s technology and surveillance, such as its “social credit system,” worry about a techno-dystopia, despite similar surveillance being done in Western countries (and by their own tech companies). The United States has expressed concern about the activities of university students from China, while Australian politicians have spent months debating “foreign influence” in their domestic politics: a rather poorly veiled reference to China.

A good case study is Google’s cancelled re-entry into China with a Chinese-compliant version of Google search. This was met with controversy both by Western media and Google’s own employees. This is partly the company’s own fault, due to its loud and public withdrawal from China almost 10 years ago. But similar concessions by Google in smaller countries have not sparked such controversy; only China has. Interestingly, a Chinese version of Google might actually be of value to Chinese people, as local search engines like Baidu have been plagued with scandal, hoaxes, and frauds. But the fear that Western observers have about China means that this benefit could be denied them.

One could argue that this is part and parcel of the usual geopolitical conflict between an incumbent power and a rising one, or that they are merely representations of how the economic relationship between China and the West continues to change.

But the source of suspicion is deeper and often not spoken about. For a long time, “American exceptionalism” (and “Western exceptionalism” in general) has been based on the idea that the American or Western culture, way of life, and values are superior. One could perhaps see racial supremacist undertones in these beliefs as well. After all, these were the same sentiments that permeated the colonial era and were used to explain away or justify the shameful excesses of colonialism.

It is clear that neither the United States nor Europe is mentally prepared for the prospect of another country, especially a non-Western one, being successful, let alone overtaking the West. This is particularly true for China: a country long viewed as backward but which has now succeeded while following its own political, economic, and cultural model. For the first time in two centuries a non-Western nation with a wholly different political system is challenging the West, and this is causing great anguish.

“American exceptionalism” is threatened when a country with different values does well. We first saw this in the 1980s: anti-Japan sentiment was sparked when Japanese companies started to buy American cultural symbols. This worry was reflected in American popular culture, best shown in any depiction of an American future dominated by Japanese companies. But this sentiment was nowhere near the level we can see today regarding China. Even the most liberal of Western media outlets have found it near impossible to portray China in a balanced way, finding it difficult to remove their inherent comfort with deep-rooted Western ideas and framings, and to confront their own prejudices.

The United States and the West by extension cannot accept China’s success on its own terms and this permeates almost all segments of society. This is one issue on which there is bipartisan support in the United States. The fear of China and the rest is real. They cannot just accept that China’s success says nothing about how Western countries should govern themselves. Instead, China’s model must be proven incorrect, by ignoring its successes in poverty reduction, education, and economic development and focusing on other issues.

There are hard lessons and warnings for here for developing countries, especially large ones finding their rightful place in the community of nations. People assume that the rise of other large developing nations, such as India, Indonesia, or Nigeria, will not be as disruptive as China’s, perhaps due to the belief that they would “balance” China or would not threaten to disrupt the international order. But this betrays a Western need to oppose China at all costs. Other countries need to be aware that they might be next if they begin to demand a say in world affairs. A rising India could be next.

If the roots of American-Chinese tensions come from something other than just geopolitics or economics, then the ascent of these large developing countries may not be as smooth as they hope. This would be due to the Western, U.S.-led opposition to the “rise of the others,” something the world has not seen in over two centuries. It is this that could well define and shape geopolitics in the 21st century. Denying that this sentiment exists and drives foreign policy would be to play into the hands of those who wish to preserve a Western world order at all costs.

One question many Americans asked themselves in the aftermath of the September 11 attacks was “Why do they hate us?” One wonders if people in China are asking themselves the same thing. They may not like the answer they get back.

#### Risk management induces volatility upon billions to produce stability for the security state and capitalism. That ensures extinction by warming.

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Innovation organized by entrepreneurs of the self, of the cyberself, creates possibilities for arbitrage on those super-sets of labor-time, attention and life-time; and all the while, everyday risk management is underpinned and indeed anchored by the calculus of genocide. From the binary of the A-bomb to IBM’s punch-carding of the Nazi Holocaust, from the calculus of sovereign debt to that of social media, the lives of people (in Nagasaki, in Auschwitz, in Furguson), become the substrate that registers the meaning of the compute—at least the meaning as far as they may have been concerned. So many are posited as but renewable pawns in an endless game, and the game goes on. Dispossession and genocide, and the capacity to wreak these, guarantee the liquidity of the financial system by guaranteeing that there will always be some billions willing or forced to do anything for its money and the access to information, to informed matter and therefore to life that it provides. In our era, we see clearly that, under capital, the “stability” imposed by systemic integrations and its programs of finance, surveillance, security, mediation, and so on produces ever greater volatility, and we see that this volatility risk can be bought and sold; it can be cut up, bundled, bought, and resold, priced as content-indifferent numbers based upon volatility indices. Meanwhile the markets roil, dispossession rages, and the planet boils.

As history could confirm, by the mid-twentieth century, the complexity of the techniques for the management of societies, from markets to warfare, from media to cybernetics, and now from social media to the derivatives created by synthetic finance, all required discrete state machines to store and manage the pertinent inventories, schedules, and programs--their valuable information. Though usually thought of as properly belonging to the history of science, communication, mathematics, or computation, the socioeconomic endeavors composing the history of the discrete state machine and its ever more supple functionality are to be thought as part of the increasing complexity of capitalist abstraction and thus the abstraction of social relations. They are the elaboration of real abstraction, the expansive formalization of the field of exchange taking place “behind the backs” of living people. These socioeconomic endeavors such as Google, Facebook, the security state, are the effective occupation of the space and time at all scales by the logistics of exchange and its expanding field of production.

Datalogical representation is already risk management. Management, efficiency, optimization; Foucault’s entrepreneur of the self; and even Brian Massumi and Erin Manning’s “more than human of the human” all recognize a technological paradigm of control operating in and through (and as) the individual (Massumi 2018). We may also observe that the techno-logic of capitalism built upon efficiency—the maximum exploitation of the laboring substrate to meet the demands of the falling rate of profit—prevails across all organizational scales, from the individual to the laboratory to the university to the jail, the township, the state, and the nation-state. In “cultural” spaces, representative agents (a.k.a. subjects) manage and aggregate resources, offering themselves as profiles or brands that are themselves not only marketable, but marketable as derivative exposure to their underliers: their audiences, networks, assets, and currencies. I “friend” you to add you to me, to gain exposure to your network, to add you to my portfolio I am an “influencer.” “Culture,” too, understood as a semi-autonomous domain separable from materiality and technology, can today only be a fetish—another case of platform fetishism—because the generalization of computing means that culture as the connective, communicative tissue of the sociosemiotic is ever more subject to the granularization and grammartization of commodification on the “object’ side (and, its other aspect, the fractalization of fascism on the “subject” side) in what, from a global standpoint, is a racial capitalist sociocybernetic bio-techné. Such is “culture” today—an expression of an overall informationalization of social relations subject to historically imposed computability. Cultural form, computable because inseparable from computation, heretofore always a way of connecting to (or disconnecting from) a multiplicity of networks, is now itself a derivative—a social derivative. Its derivative condition explains what was known as “the postmodern condition,” and is instituted by the universal expansion of the factory code toward the total colonization of space, time, representation, and mind: sociality itself in the largest sense.

That the principles of the ordination of matter, being, time, and value by number (or of publics by statistics, and/or of opinions by likes) were perceived to be universal, that is, generally applicable to all phenomena, was more than convenient. It was, as we have said, colonial. It was racializing and gendering. It was capacitating and maiming (Puar 2017). The math, though famously “content-indifferent,” was never value free. Nor were the devices, from desktops to mainframes, from bombers to smartphones, that it spawned. As Diane Nelson (2015: 56) writes in *Who Counts?*, her astonishing ethnography of Mayan number systems and genocide and, also and as importantly, her scathing ethnography of western mathematics and genocide, “Double-entry bookkeeping is also an ‘ethnomathematics,’ but one with an army.” Double-entry bookkeeping was also a proprietary technique; its truth claims, in the form of accounts, implied pathways of control and functionality that served as conduits for capitalization and colonization. It was a system of representation that repressed noise (context) to clearly resolve the value signal called price in a calculus of profit and loss. In our own period, where we see very clearly (simply by looking at the business pages or, for that matter, the culture pages in any newspaper) that contemporary global capitalism is in lockstep with computation, we might expect that the politico-economic meaning of computation as an emergent order of proprietary organization is becoming clear. As new and powerful terms such as *platform sovereignty* (Bratton 2016), *algorithmic governance,* and *the society of metadata* or “*metadata society*” (Pasquinelli 2018) indicate, it appears that it is the information itself that has (or indeed is) value. But the argument here is that it is only valuable within the framework of computation, and indeed within the framework of computational racial capital—at least thus far. Information is the result of that framework; it is an ethno-graphic (not just anthropocentric) instantiation composed from, in, and on states of matter. The framework, a computational infrastructure that is also primarily fixed capital, emerges in conjunction with the myriad phenomena that are now treated informatically; the apparatus is the other side of the supposedly raw material of information. Information is and can only be a relation. The clear implication of this argument is that, just as a DVD presupposes a technical world that can record it and make it play, the very presence of “information” implies the background armature of computation as a mechanism of perception and organization that is fundamentally social and historical. This background armature of perception and organization further indicates the background armature of racial capital as the primordial condition—the meta-machine architecture—of the present system of accounts. We note, and not only in passing, that this way of narrating the epic poem of AI puts anti-Blackness, slavery, settler colonialism, indentured servitude, imperialism, sexism, proletarianization, racial capitalism, and the active organization of oppression for profit at the epistemic center of a computer that could be called world history. It is computation that perceives information, and it is capital expansion that requires the perceptual-instrumental process endemic to quantification, digitization, and computation. The entire system has its conditions of possibility and derives both its significance and its character from the history of capital accumulation, that is itself theft and only theft, and which is, to defer again to the chorus: colonialism, slavery, white heteropatriarchy, imperialism, globalization, financialization, and genocide.

**You should reject the affirmative in favor of a cognitive strike. This refuses the internalization of relations that structures the racial capital of the world computer and disrupts the functioning of capitalism by engendering futilities that creates noise.**

Beller 21 (Jonathan Beller = Professor of Humanities and Media Studies and Critical and Visual Studies at Pratt Institute, “Introduction:  The Social Difference Engine and the World Computer,” in *The World Computer: Derivative Conditions of Racial Capitalism*, Duke University Press, pp. 183-189 BEH)

Given the sea change in the nature of **languages and images** themselves— their wholesale transposition and transformation from a means of **representation to a means of production**— the difficulty here is both with the substrate of communication (its bits) and with the us- versus- them perspective: we want to ban advertisers, but today we must also confront the disturbing possibility that we are them. Remember, “they” **program** “our” language and “our” imagination, “we” speak **“their” thought**— indeed, that is our work, or rather our labor. What to do with the fact that “we have seen the enemy and he is us?” One could say, one could want to say, “I don’t care who you are: if you live in the first world, if you live in the Global North, then fuck you! You ain’t no victim, even if you’re sick.” But who would be saying that? Probably some other Northerner, writing about how culture or the Venice Biennale, as if it were, could or should be more than a lavish spectacle of global suffering staged for a cosmopolitan elite. As capital’s nations, banks, armies, schools, languages, newspapers, and films did to its colonies and colonial subjects, the current **institutions from states to computer**- media companies do to “us”: they command us to make ourselves over **in capital’s image** for their own profit through networked strategies of **expropriation and dispossession**. “We” do it to ourselves, and our representations of **self and other are designed to sell** a version of ourselves back to ourselves so that we can perform further work on what is now the raw material for the next iteration of images. Therein lies our ontological lack, an ontological lack of solidarity and of even the possibility for solidarity. Therein lies the desire for and indeed necessity **to become a plantation manager** — the word is overseer. Though it is beyond the scope of this essay, this digital neocolonialism that practically commands global Northerners to in one way or another accept Nazism and genocide with their cappuccino could be understood as being on a continuum with the internal colonization of Europe by the German banks— which depends of course on the **distributed production of a kind of neoliberal “realism**” that Mark Fisher (2009) called “**capitalist realism,”** and was only ever a hair’s breadth away from fascism. This fact of our investment in and by advertising, the conversion of the sign to what I call the “advertisign,” poses a genuine problem for theory— indeed an unprecedented one. This problem is particularly evident considering the material conditions (class, nationality, education, race, language, et c.) of the participants in the would-be counterhegemonic theoretical discussions of culture and policy that presuppose the books, computers, schools, and institutions that sustain these. Those within the circuit of these discussions have already passed through a homogenization process which **programs them in compatible systems languages**. **Without submitting ourselves** and our own aspirations to radical critique, without conducting a Gramscian inventory of our ostensibly internal constitutions, we run the risk of merely trying to set up a **competing corporation** with a new business model. The revolution will not **be televised**; decolonization **will not be a brand.** Any would-be anticapitalist “we” runs this risk of coopting and cooptation from the get-go, particularly if it does not think about the materiality of **social production** from top to bottom: class, yes, but also race, nation, gender, sexuality, ability, geolocation, historical stratification. The world’s postmodern poor, the two billion– plus living on two dollars a day, also lab or to survive in the material landscape organized by the post- Fordist social factory its **anti- Blackness, its Islamophobia, its endless and mutating racism** and imperialism. However, from the standpoint of capital, **the role of those at the bottom is to serve as substrate** for image- production and semiosis; not only in factories, cottage- industries, subsistence farming, and informal economies, but also as starving Advertisarial Relationshordes; “irrational,” criminalized or surplused populations; subject- objects for policing, encampment, and bombing; desperate refugees; and even as voids in the idea of the world—as sites of social death. Forgive me, but I’d wager that no one capable of understanding these words can claim full exemption from the indictment they issue regarding structural complicity with the production and reproduction of everyday life. Humans **are troped (via discourse and the screen) to organize military production**, national policy, internment camps and prisons, bourgeois imaginations, museum shows, corporate strategy, and market projections. Let us clearly state here that **any program** that does not admit this excluded **planet into dialogues** **that vitiate** the **monologues imposed by capitalist** informatics and advertisigns is still floating in the realm of the ruling ideas **and therefore participant in murder.** These ruling ideas are the ones whose density and weight, whose material support and very machinery, threaten to further crush the late- capitalist poor out of not just representation but out of existence. This erasure and disposability, imposed by systems of informatic inscription designed to absorbe very output of sense, is the achievement of the advertisarial relations endemic to computational racial capitalism. When information is an advertisement for itself that presupposes the operating system of the world computer as virtual machine, **banning what we recognize as advertising on the internet, even if an excellent beginning,** is just not adequate to address these issues of representation, social justice, planetary and climate racism, and emancipation. To summarize: the forms of sociality which are the conditions of possibility for the online, informatically organized r elations— best characterized as advertisarial — run through e very sector and register of planetary life. The internet, while recognizable as an effect and a cause of the current form of **planetary production and reproduction**, cannot be considered in isolation as a **merely technical platform or set of platforms if its historical role is to be properly understood.** To take the internet as an autonomous technological force results in a species of platform **fetishism that disavows both the histories and material conditions** of its emergence, conditions that are, in short, those of screen culture and racial capitalism; this is to say that it, the internet, is the very means by which the capitalist suppression of global democracy (which is emphatically, economic democracy as well) has been accomplished and continues. If the internet is autonomous, it is because it expresses the autonomization of the value form. As noted previously, **with the hijacking of communications** and **semiotic infrastructures** by racial capitalism, the medium is the message and **the message is murder.** To ban advertising on the internet would be a good start— but what if the whole thing is advertising? **One reading of** what I have said thus far might suggest that, giv**en the expropriation of the cognitive- linguistic, our volition is overtaken by capital logic;** and given our inability to cogitate in any way that is genuinely resistant to capitalist expropriation, coercion, strictly speaking, **is no longer necessary to impose cooperation for capitalist production.** We “want” to cooperate productively, our desire— which, from the dispossession of even language and mind constitutes ourselves as subjects in the media ecology of the capital is t technical image, that is, in and through the organization of digital information—**is itself an iteration of capital, a script of becoming predestined to become capital**. The old language scored by the new image machines and their extractive algorithms locally organizes cooperative subjects who want to cooperate with vectoral capitalization. **We want to provide content in order to derive currency and survive.** Our solidarity on the internet produces more internet. Thus, in a certain way— and particularly since **we no longer properly have any thoughts of our own—we all collaborate in a world organized by images and screens, thereby participating more or less mindlessly in the seamless realization and triumphant apotheosis of the programming business.** However, I am sorry to have to report that the dystopian vision **here is not quite as bucolic as even this** already dreary picture of unwitting and irredeemable pulverization and servitude. While I do see that representation and semiotics have been increasingly flattened à la Orwell and Marcuse by a vast internalization of the apparatuses of oppression ( in which “**thought” is the** [productive] thought **of the [capitalist**] Party and “**repressive desublimation**” is an engine of capitalist- fascist **production)** the “old problems” like the hierarchy of class have not gone away; neither have racism, sexism, homophobia, transphobia, ableism, and fascist nationalisms ceased playing their roles to create vectors of privilege for white male– identifying aspiration. Indeed, most thought today, such that it is, is all about maintaining hierarchical society. **The thinking runs thus**: capital is nature, capital is eternal, capital is information is nature. Or, in a more pedestrian mode: **human beings are naturally acquisitive and competitive**, economic growth and technological advancement mean progress, **this tech provides**, **or almost provides,** a color- , gender- , and religion- blind society, and so on— and one must advance one’s place in it by any (crypto- or not- s o- cryptofascist**) means necessary.** Of course, there exists better thinking out there. Mia Mingus: “As organizers, we need to think of access with an understanding of disability justice, moving away from an equality based model of sameness and ‘we are just like you’ to a model of disability that embraces difference, confronts privilege and challenges what is considered ‘normal’ on every front. We don ’t want to simply join the ranks of the privileged; we want to dismantle those ranks and the systems that maintain them” (Mingus 2011, cited in Puar 2017: 16). However, there is **broad- band, ambient programming that facilitates assuming neo- liberal** and full-on **fascist subjective sovereignty**. This programming seeks triumphant brushes with plenitude (communion with the big Other, as distinct from the racial or otherwise other, becomes the ego- ideal) , and this same programming is violent, competitive, hateful, mean- spirited, and alienating when embraced—at the same time that it is also cooperative, simpering, and abject. Servitude, even when automatic and mostly unconscious, is unhappy and, as we can see any day from the daily news, utterly pathological and sick. Of course, this diagnosis represents a huge generalization, but despite its broad-brushing lack of subtlety we may find that such a schizoid oscillation between entitled adjudicator and abject supplicant sums up the contours of your average reality televisions how or comments section on YouTube. It is Bateson’s (2000) and Deleuze and Guattari’s (1977) schizophrenic, caught in the double- bind, who has become the capitalist norm— the one who struggles to negotiate in the form of contradictory signals the aporias of hierarchical society, while reproducing it, and all the while experiencing their own psychic dissolution as an injunction to create. 3 With this schizoid capture in mind, let me then develop my question about the internet— “ What if it is all advertising?”—in the framework of post- Fordist production. The argument is that, in the context of virtuosity and the expropriation of the cognitive- linguistic by computational racial capital, sociality itself has become advertisarial, a ceaseless waging of capitalized exploits designed to garner attention and value for oneself and one’s capitalistic. This situation represents— indeed imposes— a derivative logic, a logic **in which every action** is a hedge, a kind of risk management devoted to maximize a return. In addition to the fractalization of fascism, in which agency is manifest as a profile that has aggregated the attention of others, advertising has worked its way into the sign itself, into the image, and into data visualization, and it has generated the advertising . All signs become points of potential cathexis, derivative positions on the underlier that is social currency and ultimately value. This new type of sign is not simply the brand but also an element of vectoral language (Wark 2007): functionalized words in a production channel, engaging in the micromanagement of desire, the production of new needs, and the capturing of the imagination, all in order to induce linguistic and behavioral shifts in the attention of others while aggregating their attention for oneself— t urning their heads with an interface. This combination of the manipulation of market conditions (that is, everyday life) through techniques of risk management is no longer merely the province of advertising but of so- called tuman interactivity 188 Chapter 4(what was once just communication and before that culture), now become adversarial through and through. From Smythe’s claim in the “Blindspot” essay (1977) that all leisure time has become lab or time, to Virno’s (2004) notion of virtuosity, we have seen aspects of this model for the capitalist overdetermination of apparently unremunerated time before. However, here— with the financialization of expression—we clearly grasp that the financialization of everyday life means also the convergence of semiotics and financial derivatives. Given the thoroughgoing intensification of vectoral, and in fact matrixial, signs, we need to investigate its implications in the context of a discussion of radical media practice. I will make two additional points here before shifting gears and turning at the end of this chapter to what I identify as an aesthetics of survival—an aesthetics that emerges from within the matrix of adversarial, schizoid capture. The final chapter of this volume will endeavor to extend aspects of such socio aesthetic forms, those resistant to computational racial capitalism, to new notions of radical finance and the possibility of platform communism. If, as was already becoming true in the cinematic mode of production, the dominant means of representation have become the dominant means of production, the questions of and models for political agency are radically transformed, and the urgent need to decolonize communication and decolonize finance presents itself. Future communication will require a cybernetic approach, and, as wes hall argue, this cybernetic approach will necessarily be financial, though it will be reaching toward a different order and different mode of production. Like communism, because it will need to be communist, it will see economic transformation of the material relations of production and reproduction as essential to the revolution. It will draw on the repressed and extracted cognitive- linguistic resource of the racialized and other wise marginalized and configure ways to make our voices matter both as meaning and as tools for the reorginzation of the material world and the social relations therein prescribed. Language and images are neither inside nor outside; they are part of the general intellect— currently they are at once media of thought and of capital. We also know that languages and images are not isolable, meaning that they are not and have never been stand- alone entities but rather exist in relation to their media, their platforms, which are again inseparable from society and its institutions. Furthermore, each platform relates to another platform. Paraphrasing McLuhan, we could even say that the “content” of a media platform is another platform. Thusly the general intellect is inseparable from its media platforms and their financials. We see that the general intellect, once largely held in common, is increasingly being privatized; the very media of our thought belong to someone else . This expropriation of the media commons is precisely the precondition of the real subsumption of society 189 Advertisarial Relationsby capital. It is an extension of the ongoing expropriation begun by primitive accumulation and money as capital, and it has been accomplished through the financialization of media as platforms of extraction. The ramification of mediation by computation and information has resulted in its convergence into formats offering derivative exposure to underliers that are the expressive vitality and futurity of our communication. We therefore no longer have any organic relation to the materials for thought itself (sincerity has become a myth, at least in the medium- term of most circles)— t he words, images, and machines we require to think, to express ourselves, to interact, and to know have been ripped from the species and privatized via the longue durée of dissymmetrical exchange. We work on the words and images, but as numbers they belong to someone else. The media themselves have become forms of capital— forms of racial capital— and our usage of these media means that we work to add value that valorizes capital, for the capitalist and within a relation designed as much as possible to guarantee that our creative acts necessarily occur as dissymmetrical exchange with capital. I write this book in a discourse that does not just not belong to me because it is shared, but in a discourse that is increasingly the property of a set of institutions— publishers, journals, universities— that all have their eye on the bottom line. The means by which we most intimately know the world, ourselves, and our desires (our images and words) are themselves vectors of capitalization intent upon converting our very life- process into surplus value (which is to say value for capital). We need strategies that will seize the means of production and create a reverse subsumption of affect, intellect**, knowledge**, **capability, communication, and community.** When all media have converged as economic media, it is **economic media that must be re- engineered**. When all media have converged as economic media, it is economic media that must be re- engineered. Again, I think this subsumption of cognitive and affective capacity, the quasi-automating (scripting) of productive labor for capital, is what Stiegler means by the proletarianization of the nervous system—which would include the proletarianization of the pathways of feeling and thought. Our affective capacities are put to alienated and alienating work in the social factory, and their product too is alienated, producing ever-intensifying and ever-accumulating dispossession and disempowerment as the dialectical antithesis of its simultaneous production of unprecedented wealth and power for the cyborg avatars of the great media conglomerates. Intellect and emotional intelligence, the product of thousands of years of species- becoming, is being strip-mined so that extraction machines may continue their furious innovation to further discount people. I write this book aware of the pressure to think it just right, to at once extend thinking in order to command attention and produce new needs, but also to delimit it, to control myself, and to put the reins on whatever counterpower may rage within my body, because academia can tolerate only so much “bullshit” and no more. Yes sir, I’ll be careful not to cross that line, but a word to the woke: the bullshit is the best part. From a historical perspective, this encroachment on the means of representation—that Banksy and I and a billion others join the silenced majority in opposing—indicates that the individual subjective agent, itself a platform for sociality that developed with the rise of capitalism (as the subject who relates to other subjects in the market, the bearer of the commodity and thus its thought), is nearly **defunct.** As has been noted previously, in a world where life processes are stripped, ripped apart, rebundled, and sold as derivative exposures, the individual subject is an outmoded technology despite the fact that it still appears as a skeuomorph in certain updated technosocial apparatuses—like the latest forms of films, games, influencers, and versions of national politics that proffer invitations to momentary individualistic identification for the dividual purpose of providing a sense of familiarity and orientation. While palliative for some in small doses, such individuality is no longer a viable (which is to say, sustainable) fantasy. The real thought is that of the infrastructure, of the AI that codes our meat and scripts our sheets. Sure I take up the mantle for a few moments each day to appear as the agent of this text, suiting up as the operator of an intellect that might be adequate to the informatic shit-storm of racist, capitalist, imperialist, patriarchal, for-profit assaults, but then I drop off into an ocean of petty concerns, food shopping, and home repairs. And even when I say “I,” to perform as the nexus of all this insight, I also know that it’s hardly me talking. I’m just curating at the gates of shit that needs to be said, and hopefully titrating to let the right stuff through. That’s part of my politics though Dog knows that I could create a more lucrative named-professor type profile with just a little more discipline, a bit more self-interested adherence to the protocols of the academy’s factory code. Instead, there is the effort to overturn, to be or at least to live something beyond being the scribe of the world computer, to at once witness the drama of the emergence of the intelligence of commodification, testify to its outrage, and intimate the possibility of its overthrow. Such would be the art of this text, practiced at the limits of disciplinarity and of subjectivity, guaranteed by nothing and no one. The expiration of the subject form, imminent since the subject’s first intimation of mortality—and made structurally mandatory by Freud and especially, with the full-blown rise of the sign at the moment of it radical marginalization by visuality, by Lacan—is not necessarily a cause for lament, despite the increasingly intense fading of its incalculable beauty, its sad reduction to cliché. From a political perspective, it means that within each concrete individual body the presumed continuity of the individual is riddled with contradictory and indeed unassimilable indicators; it means also that there exists in differing quantities and qualities capitalist and noncapitalist striations or sectors. Hallways of emptiness, but also hallways of love. Like bundled assets, the mind-body is tranched by executable logics organized by a calculus of risk available to investors. There are, to be a bit simplistic, **aspects of desire that are** programmed (indeed farmed) to produce practices that function in perfect accord with capitalist accumulation strategies (individualizing or schizoid) and aspects of **desire that are atavistic or collectivist**, utopian, communist, or maybe even just plain lonely, and, in short, subprime. In reality, of course, desire is more singular than even such formalizations might indicate. Insert your favorite snippet of poetry here. Hortense Spillers in “All the Things You Could Be by Now If Sigmund Freud’s Wife Was Your Mother” (1997) invokes “the Dozens” and the music of and like that of Charles Mingus (152–3), to make present an “interior intersubjectivity”(140) testifying to the rich unaudited psychic life of what might today be called Blackness. There are vast resources beyond the easy resolution of hegemonic hermeneutics whether deployed by institutionally validated psychoanalysis or compressed by current systems of informatic extraction. In agreeing with Freud that consciousness makes up a small part of mental life when compared to the preconscious, the unconscious, dreams, and so on, but in rejecting the normative assumptions and disavowals (including his own Jewishness) that situate Freud and the psychoanalytic discourse that will become part of European and U.S. bourgeois society, Spillers recognizes a vast store of mental life and the possibility of listening anew. However, when speaking of politics now, we therefore necessarily speak of the abstract forms available for the conceptualization and deployment of concrete emergences whether referring to haecceities that are innumerable or collective forms of existence and psychic life actively mediating between “the one” and “the ‘masses’ ” (141). Let us listen anew. Acknowledging that we ultimately and if possible immediately want to “marry our thought” (Wynter 1994b: 65) to the wealth of subaltern forms of life and the care of the bios, allow me then to put the situation of the post- Fordist subject thusly: in Imperialism, the Highest Stage of Capitalism, Lenin (1939) showed how imperialist dividends complicated class issues in England, since many people, otherwise part of the working class, got a share of the dividends of imperialism by clipping the coupons of their investments in racist, exploitative British enterprises across the globe. Today this race-based class fractionalization is fully internalized in the Global North; on our iPads built by Chinese slaves from blood metals extracted from the Congo, we may momentarily feel like biomorphically unmarked nobles in the global cosmopolis; while on the job market or when simply seen in our raced and gendered embodiments, we are abjects. Materially and intellectually we are nodal points on a global network. The signal oscillates between narcissistic megalomania and utter abjection and can be affected by a billion parameters taking us from melancholia to outrage. **Thus, even the concrete individual is composed of class fractions, race fractions, gender fractions.** In the form of signs, we clip coupons that validate our investments. The language of object-identification, we observe here, cannot really keep up with the fluctuations resulting from the throughput of code as we work to identify and disidentify our agency. Can we audit a different mode of emergence, a different futurity than one inexorably overcoded by capital? Of course this is still somewhat simplistic and also class-specific, as many (billions even) never get to participate as an enfranchised global citizen in any aspect or moment of life, even if the lived experience of these same billions is radically overdetermined by the class(es) from which they are excluded.4 The gilded poverty of the enfranchised, as opposed to the mere poverty of the rest, is now a measure of connectivity. A more complete view is that we are the product of the world system and thus everything we are has been produced vis-à-vis globalization, and therefore everything bears the trace of the system in its entirety (again, in varying proportions). This conceptualization of concrete individuals (bodies) as global communitarian products forced to varying degrees into templates of individualized risk by capitalist states, is not to erase class; however, it suggests that, just as Fanon saw the great European metropoles as the product of third world labor, we are all products of the worst conditions prevailing in the Global South and around the planet. Global inequality is internal to **our being**. It is us. How then does one (such a one who is relatively enfranchised by the derivative language of texts such as this one) inventory those relations and produce them as formations of solidarity rather than as disavowed residuum? Is there another data-sphere, a communist one? Can we build communist interfaces, networks, **and finance?** How would **we register,** track, amplify, and render actionable the communitarian affinities, **solidarities, obligations, and debts**, the resources in the wake of too many genocides to count, that in actual practice **underpin the official economy,** collective life, and whatever authentic hope is left to our species? Perhaps we have arrived at a question worthy of theory: Is there, could there be communist algorithms? Communist derivatives? Derivative communism? We are looking for that path. To add to my point about the shifting, distributed character of political actors—that goes so far as to suggest that we can no longer think only of actors but rather must think of vectors and fields in addition to thinking of the resources developed in cultures of survival—I will make a second observation. **A political intervention** in the advertisarial relations that have this planet heading toward environmental doomsday requires not only revolutionary policy but revolutionary culture. (I defer further discussion of a third requirement, revolutionary finance, to the final chapter.) This culture must take into account that, for many on this planet, Armageddon is not the future but an **ongoing constant**. My call here (which should not be entirely unfamiliar, as it gives petit bourgeois intellectuals something important to do) is to (re)politicize semiotic and affective structures and practices, including and perhaps especially those we might control, for example our own utterances—our expression. Of course, to call them “our own” seems to contradict what I’ve said about the expropriation of the cognitive- linguistic and the intensification of aphanisis by visual, verbal, and digital media derivatives, but it is here precisely that we confront one of the significant material contradictions of our time: who or what speaks in us? This question, which I shorthand using the phrase the politics of the utterance and which you can experience palpably right now (as you endeavor to think), seems to me to insist that **our idea-making** must actively produce its solidarity with the dispossessed. We must struggle for the **radical constellation.** The question concerning the politics of the utterance, asked here in a strange passage of this text through a beyond-academic terrain, a moonless forest the traversal of which may or may not at this point lead us back to the plot, also raises the question of becoming, as well as the questions of agency and of action within the capitalist image— programmable images, racializing and racist images that, in the terms we have set out, are functionally omnipresent. Continuous media throughput has generated a capitalist imaginary structuring both language function and imaging processes, coordinated at scales and by calculative logics that exceed individual comprehension. Though the occasion is upon us, **we must struggle for space and time to think. We must** open a spread on which to bet against the dominant order. We glimpse, and we feel, that to insist upon the unremitting relevance of both culture-making and of cross-cultural transnational solidarity helps **to avoid platform fetishism** because it sees the internet and its machines not as a set or collection of autonomous technologies but as a historically emergent system of value-expropriative communication and organization, built directly upon older but nonetheless contemporaneous forms of inequality, including but not limited to historically emergent techniques of gendering, racialization, and imperialism, and embedded in the living flesh of the world. All of this calculative interconnectivity and networked agency implies, contradictorily, in fact, that the internet is not all advertising—but neither is advertising all advertising. It is also murder and struggle. Banksy knows that. The advertisarial relation is the programmatic relation encrypted in the apparatuses of capital: the war of each against all, taken all the way from finance, computation, and surveillance to the speech act and the imagination in accord with the autopoietic algorithm of the distributed Leviathan. Marx himself saw capitalism as vampiric, and today’s processes of **capitalization are even more totalitarian**, more widely distributed, and more blood-, life-, and indeed soul-sucking than even in prior eras—though such comparisons **don’t do those killed by past iterations of capitalism any good.** Despite the disavowals to the contrary, we recognize that capital needs labor, needs metabolic time more desperately and more voraciously than ever before (what else is biopolitics?) and, furthermore, that it wages war on life-time on all fronts, in order to secure labor power, its product and basis, at a discount. The pyramids of inequality become internal fractals, and even as the base broadens, the tip with the all-seeing eye (that is not a subject) ascends ever higher. **We do not** yet **know what can be destroyed** or indeed built with the massive appropriation of Banksy’s rocks, but we do know that at present **there is** total war against our using them to build anticapitalist, nonhierarchical, horizontal, solidary sociality. The refusal or détournement **of capital’s encroachment** **is** itself a creative act. Perhaps we have only **begun to glimpse what** a total **refusal might achieve.**

## Case

### 1NC---Framing

#### They have argued that policy debate is necessary for epistemic maintenance of imperialism---this is alternative solvency because it means refusing their framing undermines hegemony.

#### Their appeal to future generations reifies patriarchal power relations.

Kato 93 (Masahide, Department of Political Science, University of Hawaii, “Nuclear Globalism Traversing Rockets, Satellites, and Nuclear War via the Strategic Gaze,” Alternatives 18 (1993), DOA: 9-2-2018)

The latest form of domination through the mimetic relationship between (the First World) self and matter via technosubjectivity unveils its uniqueness in the mode of propertization. Technosubjectivity materializes the condition in which the First World self establishes property relationship with what has not been coded in the conventional space and time parameters (e.g., the earth, the ecosphere, life, environment, the unborn, the future). For example, by using apocalypse, nuclear critics set up a privileged discursive position whereby the First World self is authorized to speak for amorphous "future" generations. This discursive position entails a colonization of temporality by the First World self. The colonization of "future" has an immediate effect: the preservation of unborn generations as a case against extinction endorsed by some nuclear critics, for instance, cannot be isolated from the extension of patriarchal self over women's bodies.50 In a similar vein, the nuclear critics' assertion regarding the preservation of the ecosphere or the identification of an individual with the earth as an antithesis to extinction betrays the extension of the First World self over the space configured by the image of the globe. One should not, on the one hand, discount the political significance of the environmentalism emerged from the nuclear discourse; on the other hand, however, one should also be alert to the fact that such environmentalism and also the notion of "futurity" discussed earlier are a structural counterpart of the globalization of space and time by capital (both are linked through technosubjectivity). The extension and propertization in terms of both time and space proceeds instantaneously from the micro level to the macro level and vice versa: "the earth, like a single cell or a single organism, is a systemic whole."51 The holism reconstructed here is a discursive translation of the instantaneous focal change (from the image of the whole to the image of the spot) from the point of the absolute strategic gaze. Overall, the nuclear critics' position in freezing the status quo - that is, the existing unequal power relationship - produces nothing short of an absolute affirmation of the latest forms of capitalist domination mediated by mechanically reproducible images.52

#### Only warming leads to extinction, not war

McDonald 19, writer and geography PhD student at University of Oxford studying the intersection of grassroots movements and energy transition. (Samuel Miller, 1-4-2019, “Deathly Salvation,” *The Trouble*, <https://www.the-trouble.com/content/2019/1/4/deathly-salvation>)

A devastating fact of climate collapse is that there may be a silver lining to the mushroom cloud. First, it should be noted that a nuclear exchange does not inevitably result in apocalyptic loss of life. Nuclear winter—the idea that firestorms would make the earth uninhabitable—is based on shaky science. There’s no reliable model that can determine how many megatons would decimate agriculture or make humans extinct. Nations have already detonated 2,476 nuclear devices. An exchange that shuts down the global economy but stops short of human extinction may be the only blade realistically likely to cut the carbon knot we’re trapped within. It would decimate existing infrastructures, providing an opportunity to build new energy infrastructure and intervene in the current investments and subsidies keeping fossil fuels alive. In the near term, emissions would almost certainly rise as militaries are some of the world’s largest emitters. Given what we know of human history, though, conflict may be the only way to build the mass social cohesion necessary for undertaking the kind of huge, collective action needed for global sequestration and energy transition. Like the 20th century’s world wars, a nuclear exchange could serve as an economic leveler. It could provide justification for nationalizing energy industries with the interest of shuttering fossil fuel plants and transitioning to renewables and, uh, nuclear energy. It could shock us into reimagining a less ~~suicidal~~ civilization, one that dethrones the death-cult zealots who are currently in power. And it may toss particulates into the atmosphere sufficient to block out some of the solar heat helping to drive global warming. Or it may have the opposite effects. Who knows? What we do know is that humans can survive and recover from war, probably even a nuclear one. Humans cannot recover from runaway climate change. Nuclear war is not an inevitable extinction event; six degrees of warming is.

### 1NC---U.S. Bad :(

#### American hegemony is underpinned by genocide and violent intervention.

Morefield 19 (Jeanne, Professor of Politics at Whitman College and will soon join the Department of Political Science and International Studies at The University of Birmingham, “Trump’s Foreign Policy Isn’t the Problem,” 8 January 2019, <https://bostonreview.net/politics/jeanne-morefield-trump%E2%80%99s-foreign-policy-isn%E2%80%99t-problem>, DOA: 1-30-2020)

Trump’s willingness to say such things has precipitated an existential crisis in the international relations world. U.S. foreign policy, as an academic discourse and political practice, is built on the delicate foundation of what Robert Vitalis has called the “norm against noticing,” This deflective move has long been the gold standard of international relations; under its rules of play, IR experts act as if the United States has never been an imperial power and that its foreign policy is not, and has never been, intentionally racist. The norm against noticing thus distinguishes between the idea of the United States as a necessary world-historical actor and the reality of how the United States acts.

In that reality, the United States has long been an imperial power with white nationalist aspirations. Given the racialized nature of U.S. imperial expansion, it makes sense that Alexis de Tocqueville predicted, in a chapter entitled “The Three Races of the United States,” that the United States would one day govern “the destinies of half the globe.” In its early days, while still a slave-holding country, the United States asserted its sovereignty through genocide on a continental scale and annexed large portions of northern Mexico. The country went on to overthrow the independent state of Hawaii, occupied the Philippines and Haiti, exerted its regional power throughout Latin America, expanded its international hegemony after World War II, and became what it is today: the world’s foremost military and nuclear power with a $716 billion “defense” budget that exceeds the spending of all other major global powers combined.

“Taking over from the British Empire in the early twentieth-century,” argues James Tully, the United States has used its many military bases located “outside its own borders”—now nearly 800 in over 80 countries— to force open-door economic policies and antidemocratic regimes on states throughout the formerly colonized world. An extremely partial list of sovereign governments that the United States either overthrew or attempted to subvert through military means, assassinations, or election tampering since 1949 includes Syria, Iran, Guatemala, Lebanon, the Congo, Cuba, Chile, Afghanistan, Nicaragua, Grenada, Cuba, Korea, Vietnam, Cambodia, Iraq, Yemen, Australia, Greece, Bolivia, and Angola. Such interventionist policies have contributed substantially to today’s inegalitarian world in which an estimated 783 million people live in profound poverty. In sum, for untold millions of humans in the Global South, the seventy years of worldwide order, security, and prosperity that Ikenberry and Deudney associate with Pax Americana has been anything but ordered, secure, or prosperous.

#### Hegemony makes war more likely---intervention and military spending make conflict worse, while other factors constrain aggression. Empirics and data go neg.

Fettweis ’17 (Christopher J.; is Associate Professor of Political Science at Tulane University; May 8th; *Unipolarity, Hegemony, and the New Peace*; <https://www.tandfonline.com/doi/abs/10.1080/09636412.2017.1306394?journalCode=fsst20>; accessed 5/3/19; MSCOTT)

These assessments of conflict are by necessity relative, because there has not been a “high” level of conflict in any region outside the Middle East during the period of the New Peace. Putting aside for the moment that important caveat, some points become clear. The great powers of the world are clustered in the upper right quadrant, where US intervention has been high, but conflict levels low. US intervention is imperfectly correlated with stability, however. Indeed, it is conceivable that the relatively high level of US interest and activity has made the security situation in the Persian Gulf and broader Middle East worse. In recent years, substantial hard power investments (Somalia, Afghanistan, Iraq), moderate intervention (Libya), and reliance on diplomacy (Syria) have been equally ineffective in stabilizing states torn by conflict. While it is possible that the region is essentially unpacifiable and no amount of police work would bring peace to its people, it remains hard to make the case that the US presence has improved matters. In this “strong point,” at least, US hegemony has failed to bring peace.

In much of the rest of the world, the United States has not been especially eager to enforce any particular rules. Even rather incontrovertible evidence of genocide has not been enough to inspire action. Washington’s intervention choices have at best been erratic; Libya and Kosovo brought about action, but much more blood flowed uninterrupted in Rwanda, Darfur, Congo, Sri Lanka, and Syria. The US record of peacemaking is not exactly a long uninterrupted string of successes. During the turn-of-the-century conventional war between Ethiopia and Eritrea, a high-level US delegation containing former and future National Security Advisors (Anthony Lake and Susan Rice) made a half-dozen trips to the region but was unable to prevent either the outbreak or recurrence of the conflict. Lake and his team shuttled back and forth between the capitals with some frequency, and President Clinton made repeated phone calls to the leaders of the respective countries, offering to hold peace talks in the United States, all to no avail.67 The war ended in late 2000 when Ethiopia essentially won, and it controls the disputed territory to this day.

The Horn of Africa is hardly the only region where states are free to fight one another today without fear of serious US involvement. Since they are choosing not to do so with increasing frequency, something else is probably affecting their calculations. Stability exists even in those places where the potential for intervention by the sheriff is minimal. Hegemonic stability can only take credit for influencing those decisions that would have ended in war without the presence, whether physical or psychological, of the United States. It seems hard to make the case that the relative peace that has descended on so many regions is primarily due to the kind of heavy hand of the neoconservative leviathan, or its lighter, more liberal cousin. Something else appears to be at work.

Conflict and US Military Spending

How does one measure polarity? Power is traditionally considered to be some combination of military and economic strength, but despite scores of efforts, no widely accepted formula exists. Perhaps overall military spending might be thought of as a proxy for hard power capabilities; perhaps too the amount of money the United States devotes to hard power is a reflection of the strength of the unipole. When compared to conflict levels, however, there is no obvious correlation, and certainly not the kind of negative relationship between US spending and conflict that many hegemonic stability theorists would expect to see.

During the 1990s, the United States cut back on defense by about 25 percent, spending $100 billion less in real terms in 1998 that it did in 1990.68 To those believers in the neoconservative version of hegemonic stability, this irresponsible “peace dividend” endangered both national and global security. “No serious analyst of American military capabilities doubts that the defense budget has been cut much too far to meet America’s responsibilities to itself and to world peace,” argued Kristol and Kagan at the time.69 The world grew dramatically more peaceful while the United States cut its forces, however, and stayed just as peaceful while spending rebounded after the 9/11 terrorist attacks. The incidence and magnitude of global conflict declined while the military budget was cut under President Clinton, in other words, and kept declining (though more slowly, since levels were already low) as the Bush administration ramped it back up. Overall US military spending has varied during the period of the New Peace from a low in constant dollars of less than $400 billion to a high of more than $700 billion, but war does not seem to have noticed. The same nonrelationship exists between other potential proxy measurements for hegemony and conflict: there does not seem to be much connection between warfare and fluctuations in US GDP, alliance commitments, and forward military presence. There was very little fighting in Europe when there were 300,000 US troops stationed there, for example, and that has not changed as the number of Americans dwindled by 90 percent. Overall, there does not seem to be much correlation between US actions and systemic stability. Nothing the United States actually does seems to matter to the New Peace.

### 1NC---China Good :)

#### LIO decline inevitable

Reinert 20 (Manuel Reinert is a PhD candidate in international relations at American University, consultant with the World Bank Group, and former officer with the French Foreign Service. “America’s Democratic Shortcomings and the Liberal International Order” 11/13/20 https://www.e-ir.info/2020/11/13/opinion-americas-democratic-shortcomings-and-the-liberal-international-order/)

According to its proponents, the LIO is organized under guiding principles, including: multilateral institutions, open markets, liberal democracy, and leadership by the US. Liberal internationalists denounce the rise of authoritarian powers and receding democratic values to explain the decay of these principles. They also blame Donald Trump for deserting the LIO leadership. Under his administration, the US has indeed abandoned major international accords such as the Paris Agreement on climate and the Iran nuclear deal (JCPOA), blasted the role of IOs, and adopted an aggressive diplomacy, apart from some notable exceptions. Consequently, numerous analyses have been announcing the ‘twilight’ of the LIO and preparing for what comes next. Others have claimed that this order was doomed to fail, while the eternal debate on American involvement in world affairs is regularly reignited. Most of these analyses are missing two important components. First, they attribute the demise of the LIO to external factors and a strategically flawed foreign policy, while failing to see that such weakening is directly linked to America’s democratic shortcomings. The Trump presidency is the symptom of institutional dysfunctions that make the US less democratic. This decline is the result of rigid institutions that disproportionately favor a conservative minority. Second, they negate the extent to which the US has used this order and escaped its rules when convenient. America has a history of ambiguity towards multilateralism: even if Donald Trump took the subversion of rules-based institutions to a new level, the trend did not start with him. The conservative minority has regularly eroded the LIO foundations. Ultimately, America’s ability to improve democracy will be decisive to advance multilateralism and a genuinely rules-based international system. America’s democracy needs fixing The US has steadily declined in major democratic indices, such as the Economist Intelligence Unit democracy index and the Varieties of Democracy Liberal Democracy Index. These indices highlight factors such as the treatment of journalists, polarization, and executive adherence to the rule of law. The Trump administration demonstrates how executive disregard for democratic norms undermines the “checks and balances” framework. However, these metrics do not account for deeper dynamics peculiar to the US system such as voting power, turnout, and the extraordinary influence of money on policymaking. To take the first two issues: US institutions favor conservatives, enabling Republicans to maintain power with an ever-smaller minority of voters nationwide. Voters in small states and rural areas, who usually champion conservative candidates, are particularly powerful. States have equal representation in the Senate: from Wyoming to California. Rural voters have an edge in the House and states’ legislatures because they are more efficiently distributed in a first-past-the-post system that rewards the spread of voters across space. Since the Electoral College allocates votes according to states’ congressional delegations, these disparities are reflected in the Presidential election. The imbalance is accentuated by the winner-take-all approach, which confers voters in key “swing states” extra voting power. Over the past fifty years, the turnout of the voting age population in Presidential elections has oscillated between 50% and 55%. While the 2020 elections should set a record with 65%, the US still lags behind other democracies. Turnout in similar elections is generally around 70% in the UK and France, and 80% in Germany. This low US turnout is largely explained by the lasting problem of voter suppression. Voter registration restrictions, voter purges, felony disenfranchisement, gerrymandering, and restricted access to polling places are among the main tools used to exclude minorities and poor populations. Millions of voters have been purged over the past years (following the 2013 Supreme Court decision altering the Voting Rights Act) and jurisdictions with a history of racial discrimination have shown higher purge rates. One in 13 African-Americans cannot vote because of voter suppression. As the pandemic made clear in Wisconsin, Georgia, and elsewhere, conservatives seek to restrain voting. Republicans mounted a multi-front fight against mail-in and other forms of early voting ahead of the Presidential Election: from legal battles to unsubstantiated claims of fraud. Protected by rigid institutions, the conservative minority has been able to undermine democracy by limiting turnout. Such democratic shortcomings have had a decisive influence on the LIO. The LIO reconsidered According to liberal internationalists, the LIO is a framework rooted in the institutions built by the US after WWII. The American approach was novel because it diverted from the zero-sum thinking and promoted collective prosperity and security instead. The US provided global public goods through an array of multilateral institutions and advanced rules-based cooperation on multiple issues. Even if the Soviet threat partially explains American motivations, the commitment to liberal norms was unprecedented and there is no doubt that the international landscape would have looked different had Germany prevailed in WWII. The full version of the LIO materialized after the end of the Cold War, when the US benefited from a “unipolar moment” of unmatched power. America’s security frameworks were reinforced, while IOs saw their mandate expanded. Liberal internationalists celebrated peace-building achievements and generalized economic growth. At the turn of the century, inter-state conflicts had indeed decreased and humanitarian concepts such as the “responsibility to protect” emerged. Despite strong pushbacks against the Washington Consensus in parts of the world, 1.2 billion people came out of poverty status between 1990 and 2015. Legitimacy characterized American leadership. Yet, liberal internationalists grew increasingly disenchanted. Interestingly, they agree with realists, conservatives, and other thinkers in foreign policy on a few factors that doomed the US-led LIO’s golden age: the countereffects of untamed globalization; the rise of authoritarian and revisionist powers such as China and Russia; and America’s overextension in the promotion of liberal values. Finally, they blame the Trump administration for precipitating the decline. In fact, the US has periodically undermined the LIO over the past decades. For instance, the US has developed a habit of reneging on treaties and agreements it had signed. The US refused to ratify the Kyoto Protocol and the Rome Statute of the International Criminal Court (ICC) following the election of George Bush. The Trump administration went a step further, by blacklisting ICC officials for investigating possible war crimes in Afghanistan. Previously, the US had withdrawn from the International Court of Justice’s compulsory jurisdiction after the Court had condemned America’s interference in Nicaragua. The Iraq war is also telling. America’s democratic allies all supported its campaign in Afghanistan after 9/11 and this intervention had no difficulty being approved by the UN Security Council (UNSC). Yet, many allies opposed the intervention in Iraq as there was no clear evidence of terrorist links with the Hussein’s regime or weapons of mass destruction. The invasion went forward without UNSC backing and resulted in a humanitarian and strategic disaster.

#### Chinese leadership is key to solving all global problems – that solves the case

Shen Yamei 18, Deputy Director and Associate Research Fellow of Department for American Studies, China Institute of International Studies, 1-9-2018, "Probing into the “Chinese Solution” for the Transformation of Global Governance," CAIFC, http://www.caifc.org.cn/en/content.aspx?id=4491

As the world is in a period of great development, transformation and adjustment, the international power comparison is undergoing profound changes, global governance is reshuffling and traditional governance concepts and models are confronted with challenges. The international community is expecting China to play a bigger role in global governance, which has given birth to the Chinese solution. A. To Lead the Transformation of the Global Governance System. The “shortcomings” of the existing global governance system are prominent, which can hardly ensure global development. First, the traditional dominant forces are seriously imbalanced. The US and Europe that used to dominate the global governance system have been beset with structural problems, with their economic development stalling, social contradictions intensifying, populism and secessionism rising, and states trapped in internal strife and differentiation. These countries have not fully reformed and adjusted themselves well, but rather pointed their fingers at globalization and resorted to retreat for self-insurance or were busy with their own affairs without any wish or ability to participate in global governance, which has encouraged the growth of “anti-globalization” trend into an interference factor to global governance. Second, the global governance mechanism is relatively lagging behind. Over the years of development, the strength of emerging economies has increased dramatically, which has substantially upset the international power structure, as the developing countries as a whole have made 80 percent of the contributions to global economic growth. These countries have expressed their appeal for new governance and begun policy coordination among themselves, which has initiated the transition of global governance form “Western governance” to “East-West joint governance”, but the traditional governance mechanisms such as the World Bank, IMF and G7 failed to reflect the demand of the new pattern, in addition to their lack of representation and inclusiveness. Third, the global governance rules are developing in a fragmented way, with governance deficits existing in some key areas. With the diversification and in-depth integration of international interests, the domain of global governance has continued to expand, with actors multiplying by folds and action intentions becoming complicated. As relevant efforts are usually temporary and limited to specific partners or issues, global governance driven by requests of “diversified governance” lacks systematic and comprehensive solutions. Since the beginning of this year, there have been risks of running into an acephalous state in such key areas as global economic governance and climate change. Such emerging issues as nuclear security and international terrorism have suffered injustice because of power politics. The governance areas in deficit, such as cyber security, polar region and oceans, have “reversely forced” certain countries and organizations to respond hastily. All of these have made the global governance system trapped in a dilemma and call urgently for a clear direction of advancement. B. To Innovate and Perfect the International Order. Currently, whether the developing countries or the Western countries of Europe and the US are greatly discontent with the existing international order as well as their appeals and motivation for changing the order are unprecedentedly strong. The US is the major creator and beneficiary of the existing hegemonic order, but it is now doubtful that it has gained much less than lost from the existing order, faced with the difficulties of global economic transformation and obsessed with economic despair and political dejection. Although the developing countries as represented by China acknowledge the positive role played by the post-war international order in safeguarding peace, boosting prosperity and promoting globalization, they criticize the existing order for lack of inclusiveness in politics and equality in economy, as well as double standard in security, believing it has failed to reflect the multi-polarization trend of the world and is an exclusive “circle club”. Therefore, there is much room for improvement. For China, to lead the transformation of the global governance system and international order not only supports the efforts of the developing countries to uphold multilateralism rather than unilateralism, advocate the rule of law rather than the law of the jungle and practice democracy rather than power politics in international relations, but also is an important subject concerning whether China could gain the discourse power and development space corresponding to its own strength and interests in the process of innovating and perfecting the framework of international order. C. To Promote Integration of the Eastern and Western Civilizations. Dialog among civilizations, which is the popular foundation for any country’s diplomatic proposals, runs like a trickle moistening things silently. Nevertheless, in the existing international system guided by the “Western-Centrism”, the Western civilization has always had the self-righteous superiority, conflicting with the interests and mentality of other countries and having failed to find the path to co-existing peacefully and harmoniously with other civilizations. So to speak, many problems of today, including the growing gap in economic development between the developed and developing countries against the background of globalization, the Middle East trapped in chaos and disorder, the failure of Russia and Turkey to “integrate into the West”, etc., can be directly attributed to lack of exchanges, communication and integration among civilizations. Since the 18th National Congress of CPC, Xi Jinping has raised the concept of “Chinese Dream” that reflects both Chinese values and China’s pursuit, re-introducing to the world the idea of “all living creatures grow together without harming one another and ways run parallel without interfering with one another”, which is the highest ideal in Chinese traditional culture, and striving to shape China into a force that counter-balance the Western civilization. He has also made solemn commitment that “we respect the diversity of civilizations …… cannot be puffed up with pride and depreciate other civilizations and nations”; “facing the people deeply trapped in misery and wars, we should have not only compassion and sympathy, but also responsibility and action …… do whatever we can to extend assistance to those people caught in predicament”, etc. China will rebalance the international pattern from a more inclusive civilization perspective and with more far-sighted strategic mindset, or at least correct the bisected or predominated world order so as to promote the parallel development of the Eastern and Western civilizations through mutual learning, integration and encouragement. D. To Pass on China’s Confidence. Only a short while ago, some Western countries had called for “China’s responsibility” and made it an inhibition to “regulate” China’s development orientation. Today, China has become a source of stability in an international situation full of uncertainties. Over the past 5 years, China has made outstanding contributions to the recovery of world economy under relatively great pressure of its own economic downturn. Encouraged by the “four confidences”, the whole of the Chinese society has burst out innovation vitality and produced innovation achievements, making people have more sense of gain and more optimistic about the national development prospect. It is the heroism of the ordinary Chinese to overcome difficulties and realize the ideal destiny that best explains China’s confidence. When this confidence is passed on in the field of diplomacy, it is expressed as: first, China’s posture is seen as more forging ahead and courageous to undertake responsibilities ---- proactively shaping the international agendas rather than passively accepting them; having clear-cut attitudes on international disputes rather than being equivocal; and extending international cooperation to comprehensive and dimensional development rather than based on the theory of “economy only”. In sum, China will actively seek understanding and support from other countries rather than imposing its will on others with clear-cut Chinese characteristics, Chinese style and Chinese manner. Second, China’s discourse is featured as a combination of inflexibility and yielding as well as magnanimous ---- combining the internationally recognized diplomatic principles with the excellent Chinese cultural traditions through digesting the Chinese and foreign humanistic classics assisted with philosophical speculations to make “China Brand, Chinese Voice and China’s Image get more and more recognized”. Third, the Chinese solution is more practical and intimate to people as well as emphasizes inclusive cooperation, as China is full of confidence to break the monopoly of the Western model on global development, “offering mankind a Chinese solution to explore a better social system”, and “providing a brand new option for the nations and peoples who are hoping both to speed up development and maintain independence”. II.Path Searching of the “Chinese Solution” for Global Governance Over the past years’ efforts, China has the ability to transform itself from “grasping the opportunity” for development to “creating opportunity” and “sharing opportunity” for common development, hoping to pass on the longing of the Chinese people for a better life to the people of other countries and promoting the development of the global governance system toward a more just and rational end. It has become the major power’s conscious commitment of China to lead the transformation of the global governance system in a profound way. A. To Construct the Theoretical System for Global Governance. The theoretical system of global governance has been the focus of the party central committee’s diplomatic theory innovation since the 18th National Congress of CPC as well as an important component of the theory of socialism with Chinese characteristics for a new era, which is not only the sublimation of China’s interaction with the world from “absorbing and learning” to “cooperation and mutual learning”, but also the cause why so many developing countries have turned from “learning from the West” to “exploring for treasures in the East”. In the past 5 years, the party central committee, based on precise interpretation of the world pattern today and serious reflection on the future development of mankind, has made a sincere call to the world for promoting the development of global governance system toward a more just and rational end, and proposed a series of new concepts and new strategies including engaging in major power diplomacy with Chinese characteristics, creating the human community with common destiny, promoting the construction of new international relationship rooted in the principle of cooperation and win-win, enriching the strategic thinking of peaceful development, sticking to the correct benefit view, formulating the partnership network the world over, advancing the global economic governance in a way of mutual consultation, joint construction and co-sharing, advocating the joint, comprehensive, cooperative and sustainable security concept, and launching the grand “Belt and Road” initiative. The Chinese solution composed of these contents, not only fundamentally different from the old roads of industrial revolution and colonial expansion in history, but also different from the market-driven neo-liberalism model currently advocated by Western countries and international organizations, stands at the height of the world and even mankind, seeking for global common development and having widened the road for the developing countries to modernization, which is widely welcomed by the international community. B. To Supplement and Perfect the Global Governance System. Currently, the international political practice in global governance is mostly problem-driven without creating a set of relatively independent, centralized and integral power structures, resulting in the existing global governance systemcharacterized as both extensive and unbalanced. China has been engaged in reform and innovation, while maintaining and constructing the existing systems, producing some thinking and method with Chinese characteristics. First, China sees the UN as a mirror that reflects the status quo of global governance, which should act as the leader of global governance, and actively safeguards the global governance system with the UN at the core. Second, China is actively promoting the transforming process of such recently emerged international mechanisms as G20, BRICS and SCO, perfecting them through practice, and boosting Asia-Pacific regional cooperation and the development of economic globalization. China is also promoting the construction of regional security mechanism through the Six-Party Talks on Korean Peninsula nuclear issue, Boao Forum for Asia, CICA and multilateral security dialog mechanisms led by ASEAN so as to lay the foundation for the future regional security framework. Third, China has initiated the establishment of AIIB and the New Development Bank of BRICS, creating a precedent for developing countries to set up multilateral financial institutions. The core of the new relationship between China and them lies in “boosting rather than controlling” and “public rather than private”, which is much different from the management and operation model of the World Bank, manifesting the increasing global governance ability of China and the developing countries as well as exerting pressure on the international economic and financial institution to speed up reforms. Thus, in leading the transformation of the global governance system, China has not overthrown the existing systems and started all over again, but been engaged in innovating and perfecting; China has proactively undertaken international responsibilities, but has to do everything in its power and act according to its ability. C. To Reform the Global Governance Rules. Many of the problems facing global governance today are deeply rooted in such a cause that the dominant power of the existing governance system has taken it as the tool to realize its own national interests first and a platform to pursue its political goals. Since the beginning of this year, the US has for several times requested the World Bank, IMF and G20 to make efforts to mitigate the so-called global imbalance, abandoned its commitment to support trade openness, cut down investment projects to the middle-income countries, and deleted commitment to support the efforts to deal with climate change financially, which has made the international systems accessories of the US domestic economic agendas, dealing a heavy blow to the global governance system. On the contrary, the interests and agendas of China, as a major power of the world, are open to the whole world, and China in the future “will provide the world with broader market, more sufficient capital, more abundant goods and more precious opportunities for cooperation”, while having the ability to make the world listen to its voice more attentively. With regard to the subject of global governance, China has advocated that what global governance system is better cannot be decided upon by any single country, as the destiny of the world should be in the hands of the people of all countries. In principle, all the parties should stick to the principle of mutual consultation, joint construction and co-sharing, resolve disputes through dialog and differences through consultation. Regarding the critical areas, opening to the outer world does not mean building one’s own backyard, but building the spring garden for co-sharing; the “Belt and Road” initiative is not China’s solo, but a chorus participated in by all countries concerned. China has also proposed international public security views on nuclear security, maritime cooperation and cyber space order, calling for efforts to make the global village into a “grand stage for seeking common development” rather than a “wrestling arena”; we cannot “set up a stage here, while pulling away a prop there”, but “complement each other to put on a grand show”. From the orientation of reforms, efforts should be made to better safeguard and expand the legitimate interests of the developing countries and increase the influence of the emerging economies on global governance. Over the past 5 years, China has attached importance to full court diplomacy, gradually coming to the center stage of international politics and proactively establishing principles for global governance. By hosting such important events as IAELM, CICA Summit, G20 Summit, the Belt and Road International Cooperation Forum and BRICS Summit, China has used theseplatforms to elaborate the Asia-Pacific Dream for the first time to the world, expressing China’s views on Asian security and global economic governance, discussing with the countries concerned with the Belt and Road about the synergy of their future development strategies and setting off the “BRICS plus” capacity expansion mechanism, in which China not only contributes its solution and shows its style, but also participates in the shaping of international principles through practice. On promoting the resolution of hot international issues, China abides by the norms governing international relations based on the purposes and principles of the UN Charter, and insists on justice, playing a constructive role as a responsible major power in actively promoting the political accommodation in Afghanistan, mediating the Djibouti-Eritrea dispute, promoting peace talks in the Middle East, devoting itself to the peaceful resolution of the South China Sea dispute through negotiations. In addition, China’s responsibility and quick response to international crises have gained widespread praises, as seen in such cases as assisting Africa in its fight against the Ebola epidemic, sending emergency fresh water to the capital of Maldives and buying rice from Cambodia to help relieve its financial squeeze, which has shown the simple feelings of the Chinese people to share the same breath and fate with the people of other countries. D. To Support the Increase of the Developing Countries’ Voice. The developing countries, especially the emerging powers, are not only the important participants of the globalization process, but also the important direction to which the international power system is transferring. With the accelerating shift of global economic center to emerging markets and developing economies, the will and ability of the developing countries to participate in global governance have been correspondingly strengthened. As the biggest developing country and fast growing major power, China has the same appeal and proposal for governance as other developing countries and already began policy coordination with them, as China should comply with historical tide and continue to support the increase of the developing countries’ voice in the global governance system. To this end, China has pursued the policy of “dialog but not confrontation, partnership but not alliance”, attaching importance to the construction of new type of major power relationship and global partnership network, while making a series proposals in the practice of global governance that could represent the legitimate interests of the developing countries and be conducive to safeguarding global justice, including supporting an open, inclusive, universal, balanced and win-win economic globalization; promoting the reforms on share and voting mechanism of IMF to increase the voting rights and representation of the emerging market economies; financing the infrastructure construction and industrial upgrading of other developing countries through various bilateral or regional funds; and helping other developing countries to respond to such challenges as famine, refugees, climate change and public hygiene by debt forgiveness and assistance.

# 2NC

### 2NC—AT Growth Sus

#### Growth is unsustainable — pursuit causes extinction and turns war.

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1. Unsustainability

The way of life we have in rich countries is grossly unsustainable. There is no possibility of all people on Earth ever rising to rich world per capita levels of consumption of energy, minerals, timber, water, food, phosphorous etc. These rates of consumption are generating numer-ous alarming global problems, now threatening our survival and the survival of other species. Most people have no idea of the magnitude of the overshoot – of how far we are beyond sustainable levels of re-source use and environmental impact. If all the estimated 9.8 billion people living on earth in 2050 were to consume resources at the pres-ent per capita rate in rich countries, world annual resource production rates would have to be about eight times as great as they are now.

For instance, the ‘Ecological Footprint’ analysis indicates that the amount of productive land required to provide one person in Australia with food, water, energy and settlement area is about 6.6 ha (Global Footprint Network, 2019). If 9.8 billion people were to live as Australians do, approximately 65 billion ha of productive land would be required. However, the total amount of productive land available is only 12 billion ha. If we assume one third of this should be set aside for nature (see, e.g., Baillie Yang, 2018) the amount available for humans might be about 8 billion ha. In other words, our rich world per capita footprint is about eight times as big as it would ever be possible for all of the world’s people to sustainably share.

Figures for some other items indicate much worse ratios. For instance, the top 10 nations consuming iron ore and bauxite (from which we ob-tain aluminium and steel) have per capita use rates that are respectively around 65 and 90 times the rates for all the other nations (Wiedmann et al., 2015). Mineral ore grades are falling. All people could not rise to present rich world levels of mineral use. The same case can be made with respect to just about all other resources and ecosystem services, such as agricultural land, forests, fisheries, water and biomass.

These simple figures clearly demonstrate the impossibility of all people ever having the material ‘living standards’ we have taken for granted in rich countries like Australia. We are not just a little beyond sustainable levels of resource demand and ecological impact – we are far beyond sustainable levels. Rich world practices, systems and ‘living standards’ are grossly unsustainable, and can never be extended to all the world’s people. Again, few people seem to grasp the magnitude of the over-shoot. We must face up to dramatic reductions in our present per capita levels of production and consumption.

1.1. Now add the absurd commitment to economic growth

The main worry is not the present level of resource use and ecological impact discussed above, it is the level we will rise to given the obsession with constantly increasing the amount of production and consumption. The supreme goal in all countries is to raise incomes, ‘living standards’ and GDP as much as possible, constantly and without any idea of a limit. That is, the most important goal is economic growth.

Consider the implications. If we assume a) a 3% p.a. economic growth, b) a population of 9.8 billion, c) all the world’s people rising to the living standards we in the rich world would have in 2050 given 3% p.a. growth – in that scenario, the total volume of world economic output would be 20 times as great as it is now and doubling every 23 years thereafter.

So even though the present levels of production and consumption are grossly unsustainable, the determination to have continual increase in income and economic output will multiply these towards absurd and impossible levels in coming decades.

Why analyse in terms of 9.8 billion rising to rich world levels? Because a) it is not morally acceptable to assume that they remain much poorer than we are, and b) that’s what everyone aspires to, so we had better think about whether it is viable.

1.2 But what about technical advance?

When confronted by global sustainability problems most people just assume that technical advance and ‘green growth’ will solve them, enabling us to go on living with ever-increasing levels of affluence. They do not realise that the magnitude of the problems rules this out.

The core ‘tech-fix’ faith is that resource demand and environmental impacts can be ‘decoupled’ from economic growth, i.e., that produc-tion and consumption can go on increasing while resource demand is sufficiently reduced. This is extremely implausible (see Part Three of this anthology for more detail). How likely is it that the world’s amount of production could be multiplied by 20 while resource use and environmental impacts are reduced by, say, 50% – i.e., a factor 40 reduction? None of the thirty or more reports over the last 20 years show any global reduction at all; they all show that as GDP rises so do the impacts. The recent review essay by Hickel and Kallis (2019) pro-vides a powerful critique of ‘green growth’ (see also Ward et al., 2016).

1.3 Global problems should be seen in terms of ‘limits to growth’

The ‘limits to growth’ perspective (Meadows et al., 1972) is essential if we are to understand the most serious global problems facing us:

The environmental problem is basically due to the fact that far too much producing and consuming is going on, taking too many resources rom nature and dumping too many wastes back into nature. We are eliminating species mainly because we are taking or ruining so much habitat. The environmental problems cannot be solved in an economy that is geared to providing ever-rising production, con-sumption, ‘living standards’ and GDP (see the next essay, ‘Why this economy must be scrapped’, for more detail).

Third World poverty and underdevelopment are inevitable if a few living in rich countries insist on taking far more of the world’s re-sources than all could have. The Third World can never develop to rich world levels of consumption, because there are far too few re-sources for that. (For more detail on this issue, see the essay ‘Third World development’ in Part Two.)

Conflict and war are inevitable if all aspire to rich world rates of consumption, and if rich countries insist on limitless growth on a planet with limited resources. Rich countries now have to support repressive regimes willing to establish policies that enable our cor-porations to ship out cheap resources, use Third World land for export crops, exploit cheap labour etc. This means we must be ready to get rid of regimes and to invade and run countries that threaten to follow policies contrary to our First World interests. Our rich world living standards could not be as high as they are if a great deal of repression and violence was not taking place, and rich countries contribute significantly to this. If we are determined to remain affluent, we should remain heavily armed! (This issue is developed in the essay in part Two called ‘If you want affluence, prepare for war’.)

Social cohesion is deteriorating and quality of life is being damaged. This is so even in the richest nations, because the supreme goals are raising business turnover, incomes and the GDP, not meet-ing needs, building community and improving the quality of life. (Some details of this decline in quality of life and the benefits of an alternative way to live are discussed in Part Four.)

#### No decoupling — data that accounts for offshoring and rebound effects prove energy efficiency is getting worse. Staying below 1.5° is biophysically impossible under growth.

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Unfortunately for the ecomodernists, degrowth scholars and ecological economists have begun to poke holes in their optimistic assessments. Their response can be summarized according to three key counter-arguments: (1) the evidence that ecomodernists provide for relative decoupling is flawed and limited at best; (2) their evidence for the possibility of absolute decoupling is even weaker; and (3) even if absolute decoupling was possible in principle, there is even weaker evidence that this could occur with the necessary speed to stabilize the earth system before reaching irreversible tipping points.

First, claims that rich countries have seen relative or even absolute decoupling of economic growth from domestic material consumption have been shown to focus solely on correlations between national GDP and material throughput while ignoring the material-energetic costs embodied in imported consumer goods. For example, Thomas Wiedmann and colleagues show that while the EU, the US, and Japan have grown economically while stabilizing or even reducing domestic material consumption, a broader analysis of their material footprint embedded in their imports shows that it has kept pace with GDP growth. They conclude that ‘no decoupling has taken place over the past two decades for this group of developed countries’ (Wiedmann et al., 2015, p. 6273). Focusing on the global economy as a whole, Krausmann et al. show that its resource intensity improved over the course of the 20th century, though the early 21st century has seen a faster rate of growing resource consumption than global economic growth (cited in Hickel and Kallis, 2019). Thus, as Kallis and Hickel (Kallis and Hickel, 2019, p. 4; italics added) explain: ‘Global historical trends show relative decoupling but no evidence of absolute decoupling, and twenty-first century trends show not greater efficiency but rather worse efficiency, with re-coupling occurring’.

Second, given the limited evidence for even relative decoupling, it is little surprise that the evidential basis on which claims for the possibility of absolute decoupling rest is even flimsier. In the most comprehensive summary of the modeling evidence to date, Hickel and Kallis (2019) show that even the most optimistic scenarios fail to prove the possibility of absolute decoupling. For example, a modeling study by Schandl et al. (2016) shows that in a ‘high efficiency’ scenario, one that combines a high and rising carbon price plus a doubling in the rate of material efficiency improvement, global resource use grows more slowly (about a quarter the rate of GDP growth) but steadily to reach 95 billion tons in 2050, while global energy use grows from 14,253 million tons of oil equivalent in 2010 to 26, 932 million in 2050. The authors therefore conclude: ‘While some relative decoupling can be achieved in some scenarios, none would lead to an absolute reduction in ... materials footprint’ (Schandl et al., 2016, p. 8). A high efficiency scenario modeled by the UNEP comes to even less optimistic conclusions (with global resource use rising to 132 billion tons in 2050), since it incorporates the ‘rebound effect’ in which efficiency improvements lead to increased consumption due to resulting price reductions (Hickel and Kallis, 2019). In short, as they conclude, these ‘models suggest that absolute decoupling is not feasible on a global scale in the context of continued economic growth’ (Hickel and Kallis, 2019, p. 6).

Third, the critics show that even if absolute decoupling (from both emissions and total environmental impact) were possible in principle, this would need to occur fast enough to prevent transgression of ecological tipping points. Just focusing on the climate problem, the 2018 IPCC report claims that emissions must be reduced 7 per cent annually to reach net zero by 2050 in order to achieve the 1.5 C target, whereas they must reduce 4 per cent annually to reach net zero by 2075 for a shot at the 2 degree target (IPCC, 2018, p. 15). However, even under optimistic assumptions (e.g. a near-term implementation of a high and rising carbon price, alongside heroic carbon intensity improvements), studies suggest that annual declines of 3–4 per cent might be the fastest rate possible assuming continued economic growth (Hickel, 2019). Thus, it would most likely be impossible to meet the 1.5 C target in a context of continuous compound growth. While the 2 degree target might be feasible in this context (assuming implementation of a globally coordinated program starting in 2020), many argue that the IPCC’s estimates downplay the existence of positive feedbacks in the earth system (e.g. Steffen et al., 2018), and thus more rapid emissions cuts might be needed even for 2 degrees. On top of this, economic growth must also be decoupled from impacts on other ‘planetary boundaries’ that may have already been overshot, especially land-use change and biodiversity loss (Raworth, 2017). A number of ecologists believe that to bring humanity back into a ‘safe operating space’, total resource consumption should be reduced from roughly 70 to 50 gigatons per year (Hoekstra and Wiedmann, 2014), while a ‘half earth strategy’ should be implemented that protects 50 per cent of the planet’s surface from direct human interference (up from roughly 18 per cent today) (Wilson, 2017), possibly by 2050 to prevent tipping points in biodiversity loss and land-use change (Hickel and Kallis, 2019). Even if these claims are exaggerated, the magnitude of the overall decoupling challenge remains clear. It would mean that total resource consumption and land use needs to shrink, remain stable, or only increase moderately (depending on our assumptions regarding the further stress (if any) that planetary boundaries can handle) even as the total output of the global economy triples by 2060. It is thus not hyperbole to say, as Boris Frankel puts it, that this goal of absolute decoupling is ‘overwhelmingly staggering in its ambition and historical novelty’ (Frankel, 2018, p. 127).

#### Tech fails — doesn’t displace fossil fuels and increased consumption offsets efficiency gains.

Parrique et al. 19, Centre for Studies and Research in International Development (CERDI), University of Clermont Auvergne, France; Stockholm Resilience Centre (SRC), Stockholm University, Sweden, Barth J., Briens F., C. Kerschner, Kraus-Polk A., Kuokkanen A., Spangenberg J.H. (Timothee, July, Decoupling Debunked: Evidence and arguments against green growth as a sole strategy for sustainability, *European Environmental Bureau*, https://mk0eeborgicuypctuf7e.kinstacdn.com/wp-content/uploads/2019/07/Decoupling-Debunked.pdf)

Not leading to relevant innovations

Innovation is not in and of itself a good thing for ecological sustainability. The desirable type of innovation is eco-innovation or one that results “in a reduction of environmental risk, pollution and other negative impacts of resources use compared to relevant alternatives” (Kemp and Pearson, 2008, p.5). But this is only one type among several. In general, firms have an incentive to innovate to economise on the most expensive factors of production to maximise profits. Because labour and capital are usually relatively more expensive than natural resources, more technological progress will likely continue to be directed towards labour- and capital-saving innovations, with limited benefits, if any, for resource productivity and a potential rise in absolute impacts due to more production. But decoupling will not occur if technological innovations contribute to saving labour and capital while leaving resource use and environmental degradation unchanged.

Another issue is that technologies do not only solve environmental problems but also tend to create new ones. Assuming that resource productivity becomes a priority over labour and capital productivity, there is still nothing preventing technological innovations from creating more damage. For example, research into processes of extractions can lead to better ways to locate resources (imaging technologies and data analytics), to extract them (horizontal drilling, hydraulic fracturing, and automated drilling operations), and to transport them (Arctic shipping routes). These innovations may target resource use but with a result opposite to the objective of decoupling, that is more extraction. And this is not even considering unintended side-effects, which often accompany the development of new technologies (Grunwald, 2018).

Not disruptive enough

Another problem has to do with the replacement of harmful technologies. Indeed, it is not enough for new technologies to emerge (innovation), they must also come to replace the old ones in a process of “exnovation” (Kimberly, 1981). What is required is a “push and pull strategy” (Rockström et al., 2017): pushing environmentally-friendly technologies into society and pulling harmful ones, like fossil-based infrastructure, out of it.

First, in reality, such a process is slow and difficult to trigger. Most polluting infrastructures (power plants, buildings and city structures, transport systems) require large investments, which then creates inertia and lock-in (Antal and van den Bergh, 2014, p. 3). Let us, for instance, consider the energy, buildings, and transport sectors, which account for the large majority of world energy consumption and greenhouse gas emissions. Initial lifetime for a nuclear or a coal power plant is about 40 years. Buildings can last at least as much. The average lifetime for a car is 12-15 years, and this is about what it takes for an innovation to spread in the vehicle fleet. The wide availability of petrol refuelling stations gives an infrastructural advantage to petrol-based cars, whereas this is the opposite situation for electric, gas, or hydrogen vehicles that would require different and new supporting infrastructures. Building a highway or a nuclear plant is a commitment to emit for at least as long as these infrastructures will last – Davis and Socolow (2014) speak of “committed emissions.”

Energy is a good case in point: using more renewable energy is not the same as using less fossil fuels. The history of energy use is not one of substitutions but rather of successive additions of new sources of energy. As new energy sources are discovered, developed, and deployed, the old sources do not decline, instead, total energy use grows with additional layers on the energy mix cake. York (2012) finds that each unit of energy use from non-fossil fuel sources displaced less than one-quarter of a unit of its fossil-fuel counterpart, showing empirical support for the claim that expanding renewable energies is far from enough to curb fossil fuel consumption. The relative part of coal in the global energy mix has been reduced since the advent of petroleum but this occurred in spite of absolute growth in the use of coal (Krausmann et al., 2009).

#### Warmings existential

Kareiva 18, Ph.D. in ecology and applied mathematics from Cornell University, director of the Institute of the Environment and Sustainability at UCLA, Pritzker Distinguished Professor in Environment & Sustainability at UCLA, et al. (Peter, “Existential risk due to ecosystem collapse: Nature strikes back,” *Futures*, 102)

In summary, six of the nine proposed planetary boundaries (phosphorous, nitrogen, biodiversity, land use, atmospheric aerosol loading, and chemical pollution) are unlikely to be associated with existential risks. They all correspond to a degraded environment, but in our assessment do not represent existential risks. However, the three remaining boundaries (climate change, global freshwater cycle, and ocean acidification) do pose existential risks. This is because of intrinsic positive feedback loops, substantial lag times between system change and experiencing the consequences of that change, and the fact these different boundaries interact with one another in ways that yield surprises. In addition, climate, freshwater, and ocean acidification are all directly connected to the provision of food and water, and shortages of food and water can create conflict and social unrest. Climate change has a long history of disrupting civilizations and sometimes precipitating the collapse of cultures or mass emigrations (McMichael, 2017). For example, the 12th century drought in the North American Southwest is held responsible for the collapse of the Anasazi pueblo culture. More recently, the infamous potato famine of 1846–1849 and the large migration of Irish to the U.S. can be traced to a combination of factors, one of which was climate. Specifically, 1846 was an unusually warm and moist year in Ireland, providing the climatic conditions favorable to the fungus that caused the potato blight. As is so often the case, poor government had a role as well—as the British government forbade the import of grains from outside Britain (imports that could have helped to redress the ravaged potato yields). Climate change intersects with freshwater resources because it is expected to exacerbate drought and water scarcity, as well as flooding. Climate change can even impair water quality because it is associated with heavy rains that overwhelm sewage treatment facilities, or because it results in higher concentrations of pollutants in groundwater as a result of enhanced evaporation and reduced groundwater recharge. Ample clean water is not a luxury—it is essential for human survival. Consequently, cities, regions and nations that lack clean freshwater are vulnerable to social disruption and disease. Finally, ocean acidification is linked to climate change because it is driven by CO2 emissions just as global warming is. With close to 20% of the world’s protein coming from oceans (FAO, 2016), the potential for severe impacts due to acidification is obvious. Less obvious, but perhaps more insidious, is the interaction between climate change and the loss of oyster and coral reefs due to acidification. Acidification is known to interfere with oyster reef building and coral reefs. Climate change also increases storm frequency and severity. Coral reefs and oyster reefs provide protection from storm surge because they reduce wave energy (Spalding et al., 2014). If these reefs are lost due to acidification at the same time as storms become more severe and sea level rises, coastal communities will be exposed to unprecedented storm surge—and may be ravaged by recurrent storms. A key feature of the risk associated with climate change is that mean annual temperature and mean annual rainfall are not the variables of interest. Rather it is extreme episodic events that place nations and entire regions of the world at risk. These extreme events are by definition “rare” (once every hundred years), and changes in their likelihood are challenging to detect because of their rarity, but are exactly the manifestations of climate change that we must get better at anticipating (Diffenbaugh et al., 2017). Society will have a hard time responding to shorter intervals between rare extreme events because in the lifespan of an individual human, a person might experience as few as two or three extreme events. How likely is it that you would notice a change in the interval between events that are separated by decades, especially given that the interval is not regular but varies stochastically? A concrete example of this dilemma can be found in the past and expected future changes in storm-related flooding of New York City. The highly disruptive flooding of New York City associated with Hurricane Sandy represented a flood height that occurred once every 500 years in the 18th century, and that occurs now once every 25 years, but is expected to occur once every 5 years by 2050 (Garner et al., 2017). This change in frequency of extreme floods has profound implications for the measures New York City should take to protect its infrastructure and its population, yet because of the stochastic nature of such events, this shift in flood frequency is an elevated risk that will go unnoticed by most people. 4. The combination of positive feedback loops and societal inertia is fertile ground for global environmental catastrophes Humans are remarkably ingenious, and have adapted to crises throughout their history. Our doom has been repeatedly predicted, only to be averted by innovation (Ridley, 2011). However, the many stories of human ingenuity successfully addressing existential risks such as global famine or extreme air pollution represent environmental challenges that are largely linear, have immediate consequences, and operate without positive feedbacks. For example, the fact that food is in short supply does not increase the rate at which humans consume food—thereby increasing the shortage. Similarly, massive air pollution episodes such as the London fog of 1952 that killed 12,000 people did not make future air pollution events more likely. In fact it was just the opposite—the London fog sent such a clear message that Britain quickly enacted pollution control measures (Stradling, 2016). Food shortages, air pollution, water pollution, etc. send immediate signals to society of harm, which then trigger a negative feedback of society seeking to reduce the harm. In contrast, today’s great environmental crisis of climate change may cause some harm but there are generally long time delays between rising CO2 concentrations and damage to humans. The consequence of these delays are an absence of urgency; thus although 70% of Americans believe global warming is happening, only 40% think it will harm them (http://climatecommunication.yale.edu/visualizations-data/ycom-us-2016/). Secondly, unlike past environmental challenges, the Earth’s climate system is rife with positive feedback loops. In particular, as CO2 increases and the climate warms, that very warming can cause more CO2 release which further increases global warming, and then more CO2, and so on. Table 2 summarizes the best documented positive feedback loops for the Earth’s climate system. These feedbacks can be neatly categorized into carbon cycle, biogeochemical, biogeophysical, cloud, ice-albedo, and water vapor feedbacks. As important as it is to understand these feedbacks individually, it is even more essential to study the interactive nature of these feedbacks. Modeling studies show that when interactions among feedback loops are included, uncertainty increases dramatically and there is a heightened potential for perturbations to be magnified (e.g., Cox, Betts, Jones, Spall, & Totterdell, 2000; Hajima, Tachiiri, Ito, & Kawamiya, 2014; Knutti & Rugenstein, 2015; Rosenfeld, Sherwood, Wood, & Donner, 2014). This produces a wide range of future scenarios. Positive feedbacks in the carbon cycle involves the enhancement of future carbon contributions to the atmosphere due to some initial increase in atmospheric CO2. This happens because as CO2 accumulates, it reduces the efficiency in which oceans and terrestrial ecosystems sequester carbon, which in return feeds back to exacerbate climate change (Friedlingstein et al., 2001). Warming can also increase the rate at which organic matter decays and carbon is released into the atmosphere, thereby causing more warming (Melillo et al., 2017). Increases in food shortages and lack of water is also of major concern when biogeophysical feedback mechanisms perpetuate drought conditions. The underlying mechanism here is that losses in vegetation increases the surface albedo, which suppresses rainfall, and thus enhances future vegetation loss and more suppression of rainfall—thereby initiating or prolonging a drought (Chamey, Stone, & Quirk, 1975). To top it off, overgrazing depletes the soil, leading to augmented vegetation loss (Anderies, Janssen, & Walker, 2002). Climate change often also increases the risk of forest fires, as a result of higher temperatures and persistent drought conditions. The expectation is that forest fires will become more frequent and severe with climate warming and drought (Scholze, Knorr, Arnell, & Prentice, 2006), a trend for which we have already seen evidence (Allen et al., 2010). Tragically, the increased severity and risk of Southern California wildfires recently predicted by climate scientists (Jin et al., 2015), was realized in December 2017, with the largest fire in the history of California (the “Thomas fire” that burned 282,000 acres, https://www.vox.com/2017/12/27/16822180/thomas-fire-california-largest-wildfire). This catastrophic fire embodies the sorts of positive feedbacks and interacting factors that could catch humanity off-guard and produce a true apocalyptic event. Record-breaking rains produced an extraordinary flush of new vegetation, that then dried out as record heat waves and dry conditions took hold, coupled with stronger than normal winds, and ignition. Of course the record-fire released CO2 into the atmosphere, thereby contributing to future warming. Out of all types of feedbacks, water vapor and the ice-albedo feedbacks are the most clearly understood mechanisms. Losses in reflective snow and ice cover drive up surface temperatures, leading to even more melting of snow and ice cover—this is known as the ice-albedo feedback (Curry, Schramm, & Ebert, 1995). As snow and ice continue to melt at a more rapid pace, millions of people may be displaced by flooding risks as a consequence of sea level rise near coastal communities (Biermann & Boas, 2010; Myers, 2002; Nicholls et al., 2011). The water vapor feedback operates when warmer atmospheric conditions strengthen the saturation vapor pressure, which creates a warming effect given water vapor’s strong greenhouse gas properties (Manabe & Wetherald, 1967). Global warming tends to increase cloud formation because warmer temperatures lead to more evaporation of water into the atmosphere, and warmer temperature also allows the atmosphere to hold more water. The key question is whether this increase in clouds associated with global warming will result in a positive feedback loop (more warming) or a negative feedback loop (less warming). For decades, scientists have sought to answer this question and understand the net role clouds play in future climate projections (Schneider et al., 2017). Clouds are complex because they both have a cooling (reflecting incoming solar radiation) and warming (absorbing incoming solar radiation) effect (Lashof, DeAngelo, Saleska, & Harte, 1997). The type of cloud, altitude, and optical properties combine to determine how these countervailing effects balance out. Although still under debate, it appears that in most circumstances the cloud feedback is likely positive (Boucher et al., 2013). For example, models and observations show that increasing greenhouse gas concentrations reduces the low-level cloud fraction in the Northeast Pacific at decadal time scales. This then has a positive feedback effect and enhances climate warming since less solar radiation is reflected by the atmosphere (Clement, Burgman, & Norris, 2009). The key lesson from the long list of potentially positive feedbacks and their interactions is that runaway climate change, and runaway perturbations have to be taken as a serious possibility. Table 2 is just a snapshot of the type of feedbacks that have been identified (see Supplementary material for a more thorough explanation of positive feedback loops). However, this list is not exhaustive and the possibility of undiscovered positive feedbacks portends even greater existential risks. The many environmental crises humankind has previously averted (famine, ozone depletion, London fog, water pollution, etc.) were averted because of political will based on solid scientific understanding. We cannot count on complete scientific understanding when it comes to positive feedback loops and climate change.

# 1NR

## K

### 1NR---Space Colonization

#### Space colonization spreads monstrous capitalism infinitely throughout the universe.

Kriss 3/8/17 (Sam, Writer, "Stop Joking About Fleeing Earth for Newly Discovered Planets", Atlantic, 3-8-2017, https://www.theatlantic.com/science/archive/2017/03/space-travel-wont-save-you-from-capitalism/518853/, DOA: 7-28-2017) //Snowball

Capitalism, as David Harvey once remarked, never solves its contradictions, it only moves them around. If it becomes impossible to make profits in Europe, you set up plantations in the New World, where you can work people to death for free. If you’re worried about socialist uprisings in your own country, you can move the production process to south-east Asia, where client states can brutalize their populations without the people that matter ever having to care about it. For centuries the capitalist mode of production has chased itself in tightening circles around a planet that’s starting to wear away under the strain, thinning out the biosphere, removing the conditions necessary for biological life out from under its own frantic legs. It’s run out of room; there are fewer and fewer places in which to lodge the permanent crisis. The only direction left is up and out. And so the idea starts to take hold that human destiny is to conquer the stars, that the darkness beyond our planet isn’t the home of gods or aliens, but infinite lifeless space. An empire waiting to be founded. And if we don’t create it soon, the empire we have now will kill us all.

The unspoken promise is that things will be different on the seven new exoplanets: With all that room, you’ll have the freedom to build something entirely new, live the way you really want to live. It’s the promise of NASA’s poster: You’ll want to see this, it’s not like anything you’ll have seen before.

But things won’t be different on those distant planets. They’ll be exactly the same, just worse, always worse. The logic of this model of space colonization assumes a society that expands constantly, pushing itself into every empty space it can find, because if it stops for even a moment, it’ll die. It’s a society that needs to spread itself infinitely, not for any articulable reason, but simply because that’s what it needs to do. And it’s a society that is always under threat of breaking under the weight of its own contradictions and always at war with the livability of life. In other words, the exact conditions we’re all living and dying under now. It’s capitalism; it could only ever be capitalism, turning itself into all the monsters it could once only imagine. Purified from any residual traces of the soil from which it rose, liberated from its parasitic dependence on Earth and its human labor by a glut of new planets, space capitalism could transform itself into something truly monstrous: a black and segmented carapace, vast beyond thought; nested jaws gnashing through the galaxies in a lifeless, merciless greed.

If you’re worried that reactionary leaders, climate change, and nuclear weapons have the power to destroy everything on this planet, the solution isn’t to conjure up a future in which they could destroy everything on all the other planets too. Our problems have to be solved, not fed, before we risk spreading the blight to rot away the entire sky. As things stand, going to TRAPPIST-1e will not save you from your fear of Donald Trump or anything else. That tourist poster needs updating; already, there should be a big gleaming gold skyscraper jutting out between the untouched hills, because he’s going with you, clinging to the hull of your spaceship as it crosses those 40 light years of black nothing, his hair finally freed from gravity and fanning into a predator’s frill.

#### It’s an ontological impact that outweighs the destruction of sentient life.

Lee 1999 [Keekok Lee, Visiting Chair in Philosophy at Lancaster University, The Natural and the Artefactual, 1999p. 2-4]

To appreciate this dimension one needs to highlight the distinction between the artefactual and the natural. The former is the material embodiment of human intentionality--an analysis in terms of Aristotle's causes shows that all four causes, since late modernity, may be assigned to human agency.'- The latter, *ex hypothesi,* has nothing to do with human agency in any of its four causes. This shows that the artefactual and the natural belong to two very different ontological categories--one has come into existence and continues to exist only because of human purpose and design while the other has come into existence and continues to exist independently of human purpose and design. In the terminology of this book, the artefactual embodies extrinsic/imposed teleology while the natural (at least in the form of individual living organisms) embodies intrinsic/immanent teleology. However, the more radical and powerful technologies of the late twentieth and the twenty-first centuries are capable of producing artefacts with an ever increasing degree of artefacticity. The threat then posed by modem *homo faber* is the systematic elimination of the natural, both at the empirical and the ontological levels, thereby generating a narcissistic civilization. In this context, it is, therefore, appropriate to remind ourselves that beyond Earth, nature, out there, exists as yet unhumanized. But there is a strong collective urge, not merely to study and understand that nature, but also ultimately to exploit it, and furthermore, even to transform parts of it into *ersatz* Earth, eventually making it fit for human habitation. That nature, as far as we know, has (had) no life on it. These aspirations raise a crucial problem which environmental philosophy ought to address itself, namely, whether abiotic nature on its own could be said to be morally considerable and the grounds for its moral considerability If no grounds could be found, then nature beyond Earth is ripe for total human control and manipulation subject to no moral but only technological and/or economic constraints. The shift to ontology in grounding moral considerability will, it is argued, free environmental philosophy from being Earthbound in the millennium about to dawn. In slightly greater detail, the aims of this book may be summarized as follows 1. To show how modem science and its technology, in controlling and manipulating (both biotic and abiotic) nature, transform it to become the~  artefactual. It also establishes that there are degrees of 'artefacticity  depending on the degree of control and precision with which science and  technology manipulate nature. An extant technology such as biotechnology  already threatens to imperil the existence of biotic natural kinds. Furthermore  technologies of the rising future, such as molecular nanotechnology, i~  synergistic combination with biotechnology and microcomputer technology,.  could intensify this tendency to eliminate natural kinds, both biotic and abiotic~  as well as their natural processes of evolution or change. 2. To consider the implications of the above for environmental philosophy, and in so doing, to point out the inadequacy of the extant accounts about intrinsic value in nature. By and large (with some honorable exceptions), these concentrate on arguing that the biotic has intrinsic value but assume that the~ undeniable contingent link between the abiotic and the biotic on Earth would~ take care of the abiotic itself. But the proposed terraformation of Mars (and even of Earth's moon only very recently) shows the urgent need to develop a much more comprehensive environmental philosophy which is not merely Earthbound but can include the abiotic in its own right. 3. The book also raises a central inadequacy of today's approaches in  environmental philosophy and movements. They concentrate predominantly  on the undesirable polluting aspects of extant technologies on human an~  nonhuman life, and advocate the introduction of more ecologically sensitive  technology (including this author's own earlier writing). If this were the most  important remit of environmental philosophy, then one would have to admit  that nature-replacing technologies (extant and in the rising future) could be  the ultimate 'green' technologies as their proponents are minded to maintain  in spite of their more guarded remarks about the environmental risks that ma'  be incurred in running such technologies.' Such technologies would also~  achieve what is seemingly impossible, as they promise to make possible ~  world of superabundance, not only for the few, but for all, without straining  and stressing the biosphere as a sink for industrial waste. But this book argue  that environmental philosophy should not merely concern itself with the  virtuous goal of avoiding pollution risks to life, be that human or nonhuman It should also be concerned with the threat that such radically powerful technologies could render nature, both biotic and abiotic, redundant. A totally artefactual world customized to human tastes could, in principle, be designed and manufactured. When one can create artefactual kinds (from what Aristotle calls 'first. matter,' or from today's analogue, what we call atoms and molecules of familiar elements like carbon, nitrogen, hydrogen, etc.) which in other relevant respects are indistinguishable from natural kinds (what Aristotle calls 'second matter'), natural kinds are in danger of being superseded. The ontological category of the artefactual would replace that of the natural. The upholding of the latter as a category worth preserving constitutes, for this book, the most fundamental task in environmental philosophy. Under this perspective, the worrying thing about modem technology in the long run may not be that it threatens life on Earth as we know it to be because of its polluting effects, but that it could ultimately humanize all of nature. Nature, as 'the Other,' would be eliminated. 4. In other words, the ontological category of the natural would have to be delineated and defended against that of the artefactual, and some account of 'intrinsic' value would have to be mounted which can encompass the former. The book argues for the need to maintain distinctions such as that between human/nonhuman, culture/nature, the artefactual/the natural. In other words, ontological dyadism is required, though not dualism, to combat the transformation of the natural to become the artefactual. The book also argues that the primary attribute of naturally-occurring entities is an ontological one, namely, that of independence as an ontological value. Such an attribute is to be distinguished from secondary attributes like intricacy, complexity, interests-bearing, sentience, rationality, etc., which are said to provide the grounds for assigning their bearers intrinsic value. In this sense, ontology precedes axiology.

### 1NR---Asteroids

#### Asteroids won’t kill us

Walker 2016 (Robert Walker, bachelors in math from York University, MHum in philosophy from York University, studied postgraduate mathematical logic at Wolfson College Oxford 12-14-2016 "Why Resilient Humans Would Survive Giant Asteroid Impact," <https://www.science20.com/robert_inventor/why_resilient_humans_would_survive_giant_asteroid_impact_even_with_over_90_of_species_extinct-187383> LAO)

RISKS FROM AN ASTEROID We have already found all the 10 km asteroids that do regular flybys of Earth. We have found 90% of the 1 km asteroids. This makes it very unlikely that we are hit by either a 1 km or 10 km object in the next century. We could be hit by a comet. But they are rare. He mentions the comet Siding Spring which did a flyby of Mars. But it’s important to note that it actually missed Mars by quite a distance. Also, it was only 400 - 700 meters in diameter, so of a size that would have only local effects if it hit Earth. Also even with this small size, it was discovered 22 months before the flyby, so more than a year and a half. A larger comet would be discovered several years before the flyby. This shows the trajectory of Siding Spring: It actually missed Mars at a distance of 140,000 km. That’s 22 times the radius of Earth and 36% of the distance to the Moon. Earth is often “buzzed” by asteroids at that distance. It’s orbit was uncertain when first discovered, as is usual, giving a tiny chance of hitting Mars. But was eventually shown to miss. So if a comet happened to be in a similar orbit but targeting Earth instead of Mars that would be what we’d expect, that it would have a tiny chance of hitting Earth but a few months after discovery or maybe sooner, we’d know for sure that it would miss. It would be exceedingly unlikely for such a comet to hit. If it did hit, a comet the size of Siding Spring is probably not quite large enough for a tsunami depending on whether it hit into deep or shallow seas and how much it breaks up in the atmosphere. It would be seriously bad news locally if it landed in a heavily populated area, and such an impact zone would have to be evacuated if it could not be deflected. However, most of the Earth surface is sea, ice fields or desert. Probably only one impact in 100 is by comets. So it doesn’t really make a lot of sense to focus on defense from comets first. We can deal with 99% of the threat by looking at Near Earth Asteroids and they are also easiest to deflect, as if we can find them decades in advance, just the gentlest of nudges will deflect them away, just microns per second of delta v.

### 1NR---Volcanoes

#### Volcanoes won’t kill us

**Baum ’15** (Seth D. Baum, Ph.D. in Geography @ Pennsylvania State University, did his doctoral work on the concept of space-time discounting within the context of climate change decisions, co-founder and Executive Director of the think tank *Global Catastrophic Risk Institute*, and has a Post-Doctoral Fellowship with the Columbia University Center for Research on Environmental Decisions. “Winter-safe Deterrence: The Risk of Nuclear Winter and Its Challenge to Deterrence,” 23 February 2015, http://www.tandfonline.com/doi/full/10.1080/13523260.2015.1012346)

The concept of nuclear winter was first developed in the early 1980s by scientists including Paul Crutzen, who later won a Nobel Prize in Chemistry for his work on the ozone hole, and legendary astronomer Carl Sagan.3 Sagan went to great lengths to raise awareness about nuclear winter in the 1980s and early 1990s.4 This episode apparently had some influence on policy, with Mikhail Gorbachev citing it as a factor in his desire to cool that era's nuclear tensions and reverse the arms race.5 After fading from the spotlight, nuclear winter began a bit of a comeback in 2007 with the publication of new research examining nuclear winter with the latest scientific models.6 Several follow-up studies and commentaries have been published since, and research is ongoing.7 In technical terms, ‘nuclear winter’ refers specifically to a cooling of Earth's surface such that winter-like temperatures occur during summer, as caused by a sufficiently large nuclear war. Cooling to warmer-than-winter temperatures can be called ‘nuclear autumn’. As per this definition, nuclear winter/autumn is part of a broader suite of environmental consequences of nuclear war. However, all of the environmental consequences can have profound consequences for the planet and for human civilization, and likewise are important for policy. No separate term has been coined for the full suite of environmental consequences of nuclear war, so this paper will use ‘nuclear winter’ as shorthand for the full suite. This use of ‘nuclear winter’ may be interpreted metaphorically: a time of cold, darkness, and death. Nuclear winter is caused by the burning of cities, industrial facilities, trees, and other flammable materials, sending smoke into the atmosphere. The main effects of the smoke derive from the fact that the smoke rises high up into the atmosphere, past the clouds, into the stratosphere where it will not quickly fall back out in rain. At this altitude, the smoke spreads across the planet and gradually falls back out over the next 10–20 years. While it is aloft, the smoke absorbs incoming sunlight and blocks it from reaching the surface. As the smoke absorbs sunlight, the stratosphere warms, causing ozone depletion at a potentially massive scale.8 The ozone depletion causes more ultraviolet radiation to reach Earth's surface. Increased UV radiation can harm living organisms, including humans. Harmful effects include skin cancer and eye damage to animals and the inhibition of photosynthesis in plants.9 Meanwhile, the smoke blocking sunlight from reaching the surface causes colder surface temperatures and less precipitation. Precipitation declines because there is less heat to power the hydrological cycle. The main harmful effect that has been identified is a decline in plant growth, including agricultural production. Secondary effects could include disease outbreaks and additional conflicts.10 The effects occur worldwide, regardless of where the detonations occur, though detonation location can affect the spatial distribution of impacts. For both UV radiation and cooling, the magnitude of the disruption is proportionate to the amount of smoke put into the atmosphere, which in turn depends on the number of nuclear detonations, the bombs’ yields, the detonation locations, and other factors. Regarding detonation location, a key variable is whether the detonation occurs in a city, and if it does, the population density of the city. Other locations such as industrial zones can also produce significant quantities of smoke. This is why nuclear weapons testing has not caused nuclear winter: the tests were conducted in remote locations or at high altitude, and thus did not have much to burn. The location of a city on the globe can also make a difference, given Earth's topography and atmospheric circulation patterns, but this effect is smaller. The most heavily studied nuclear winter scenario involves war between India and Pakistan in which each country uses 50 nuclear weapons, each with a 15 kiloton yield, comparable to the Little Boy weapon dropped on Hiroshima. The studies assume that the weapons are dropped on each country's major cities, and not on, for example, remote military targets, producing 5 teragrams of smoke.11 In this scenario, ozone loss would range from 20 per cent to 70 per cent from low to high latitudes.12 Temperatures would fall about 1.25°C within the first year. Even ten years after, temperatures would still be about 0.5°C below normal.13 Crop yields in China and the Midwestern United States are projected to decline by around 10–30 per cent.14 One analysis estimates that at least two billion people would be at risk of starvation.15 A core point is that even a ‘limited’ regional nuclear war could have catastrophic global consequences. It should be emphasized that what drives nuclear winter is the quantity of smoke entering the stratosphere, not where the nuclear war occurs. Thus, a comparably large nuclear war between other countries would have similar global climatic and humanitarian effects. The India–Pakistan scenario offers an illustrative and relatively probable case, but any nuclear weapon state except North Korea could produce similar effects. A larger nuclear exchange involving American and Russian arsenals would cause further disruption. An exchange of about 1,200 weapons could produce about 50 teragrams of smoke, causing temperatures to fall by about 4°C. For 4,000 weapons – around what New START prescribes – there could be 150 teragrams of smoke, with a temperature fall of about 8°C. Agriculture failure would be so severe and widespread that it becomes easier to count the survivors than the fatalities.16 Climate scientist Alan Robock, who has led many of the recent nuclear winter studies, expects some survivors ‘especially in Australia and New Zealand’.17 While this is hardly a cheerful evaluation, even this may be too optimistic. Hopefully some people somewhere would find some way to survive. But the conditions would be harsh enough that survival is no guarantee.18 Finally, it should be acknowledged that, over the years, there has been some scepticism of whether nuclear winter would actually occur, or would occur with enough severity to be worth factoring into security policy.19 To an extent, one cannot be sure what would happen, because a large exchange of nuclear weapons has fortunately never occurred. However, there are at least two reasons to believe that the current round of nuclear winter science is yielding results that are at least in the general vicinity of what would actually happen. One reason is that the science uses modern climate models developed for the study of global warming. Global warming has its own sceptics and controversies, which has led to the climate models being heavily scrutinized.20 Climate science may well be the most carefully vetted of all the sciences. The nuclear winter researchers are themselves distinguished climate scientists and are using state-of-the-art climate models. And two distinct nuclear winter research groups from two different countries using two different sets of models both report approximately the same results.21 While some uncertainties in the science of nuclear winter remain and additional research could provide additional confidence, it should be expected that the current research results are basically sound. The second reason for believing that nuclear winter would occur is that it has a historical precedent in volcano eruptions. Volcano eruptions, like nuclear weapon detonations, cause large amounts of smoke to rise into the atmosphere. An insightful example is the 1815 Mount Tambora eruption. The Tambora eruption caused temperatures to fall by about 0.5°C, resulting in major food shortages and other disruptions, such that 1816 is now known as the ‘Year Without Summer’.22 While humanity ultimately survived Tambora, nuclear war could put even more smoke into the atmosphere and cause more severe disruption. It, thus, is important to factor into nuclear security policy.