## 1

#### The standard is maximizing expected wellbeing. Prefer it:

#### No intent-foresight distinction – If we foresee a consequence, then it becomes part of our deliberation which makes it intrinsic to our action since we intend it to happen.

#### Extinction comes first – it’s the worst of all evils

Baum and Barrett 18 - Seth D. Baum & Anthony M. Barrett, Global Catastrophic Risk Institute. 2018. “Global Catastrophes: The Most Extreme Risks.” Risk in Extreme Environments: Preparing, Avoiding, Mitigating, and Managing, edited by Vicki Bier, Routledge, pp. 174–184.

What Is GCR And Why Is It Important? Taken literally, a global catastrophe can be any event that is in some way catastrophic across the globe. This suggests a rather low threshold for what counts as a global catastrophe. An event causing just one death on each continent (say, from a jet-setting assassin) could rate as a global catastrophe, because surely these deaths would be catastrophic for the deceased and their loved ones. However, in common usage, a global catastrophe would be catastrophic for a significant portion of the globe. Minimum thresholds have variously been set around ten thousand to ten million deaths or $10 billion to $10 trillion in damages (Bostrom and Ćirković 2008), or death of one quarter of the human population (Atkinson 1999; Hempsell 2004). Others have emphasized catastrophes that cause long-term declines in the trajectory of human civilization (Beckstead 2013), that human civilization does not recover from (Maher and Baum 2013), that drastically reduce humanity’s potential for future achievements (Bostrom 2002, using the term “existential risk”), or that result in human extinction (Matheny 2007; Posner 2004). A common theme across all these treatments of GCR is that some catastrophes are vastly more important than others. Carl Sagan was perhaps the first to recognize this, in his commentary on nuclear winter (Sagan 1983). Without nuclear winter, a global nuclear war might kill several hundred million people. This is obviously a major catastrophe, but humanity would presumably carry on. However, with nuclear winter, per Sagan, humanity could go extinct. The loss would be not just an additional four billion or so deaths, but the loss of all future generations. To paraphrase Sagan, the loss would be billions and billions of lives, or even more. Sagan estimated 500 trillion lives, assuming humanity would continue for ten million more years, which he cited as typical for a successful species. Sagan’s 500 trillion number may even be an underestimate. The analysis here takes an adventurous turn, hinging on the evolution of the human species and the long-term fate of the universe. On these long time scales, the descendants of contemporary humans may no longer be recognizably “human”. The issue then is whether the descendants are still worth caring about, whatever they are. If they are, then it begs the question of how many of them there will be. Barring major global catastrophe, Earth will remain habitable for about one billion more years 2 until the Sun gets too warm and large. The rest of the Solar System, Milky Way galaxy, universe, and (if it exists) the multiverse will remain habitable for a lot longer than that (Adams and Laughlin 1997), should our descendants gain the capacity to migrate there. An open question in astronomy is whether it is possible for the descendants of humanity to continue living for an infinite length of time or instead merely an astronomically large but finite length of time (see e.g. Ćirković 2002; Kaku 2005). Either way, the stakes with global catastrophes could be much larger than the loss of 500 trillion lives. Debates about the infinite vs. the merely astronomical are of theoretical interest (Ng 1991; Bossert et al. 2007), but they have limited practical significance. This can be seen when evaluating GCRs from a standard risk-equals-probability-times-magnitude framework. Using Sagan’s 500 trillion lives estimate, it follows that reducing the probability of global catastrophe by a mere one-in-500-trillion chance is of the same significance as saving one human life. Phrased differently, society should try 500 trillion times harder to prevent a global catastrophe than it should to save a person’s life. Or, preventing one million deaths is equivalent to a one-in500-million reduction in the probability of global catastrophe. This suggests society should make extremely large investment in GCR reduction, at the expense of virtually all other objectives. Judge and legal scholar Richard Posner made a similar point in monetary terms (Posner 2004). Posner used $50,000 as the value of a statistical human life (VSL) and 12 billion humans as the total loss of life (double the 2004 world population); he describes both figures as significant underestimates. Multiplying them gives $600 trillion as an underestimate of the value of preventing global catastrophe. For comparison, the United States government typically uses a VSL of around one to ten million dollars (Robinson 2007). Multiplying a $10 million VSL with 500 trillion lives gives $5x1021 as the value of preventing global catastrophe. But even using “just" $600 trillion, society should be willing to spend at least that much to prevent a global catastrophe, which converts to being willing to spend at least $1 million for a one-in-500-million reduction in the probability of global catastrophe. Thus while reasonable disagreement exists on how large of a VSL to use and how much to count future generations, even low-end positions suggest vast resource allocations should be redirected to reducing GCR. This conclusion is only strengthened when considering the astronomical size of the stakes, but the same point holds either way. The bottom line is that, as long as something along the lines of the standard riskequals-probability-times-magnitude framework is being used, then even tiny GCR reductions merit significant effort. This point holds especially strongly for risks of catastrophes that would cause permanent harm to global human civilization. The discussion thus far has assumed that all human lives are valued equally. This assumption is not universally held. People often value some people more than others, favoring themselves, their family and friends, their compatriots, their generation, or others whom they identify with. Great debates rage on across moral philosophy, economics, and other fields about how much people should value others who are distant in space, time, or social relation, as well as the unborn members of future generations. This debate is crucial for all valuations of risk, including GCR. Indeed, if each of us only cares about our immediate selves, then global catastrophes may not be especially important, and we probably have better things to do with our time than worry about them. While everyone has the right to their own views and feelings, we find that the strongest arguments are for the widely held position that all human lives should be valued equally. This position is succinctly stated in the United States Declaration of Independence, updated in the 1848 Declaration of Sentiments: “We hold these truths to be self-evident: that all men and 3 women are created equal”. Philosophers speak of an agent-neutral, objective “view from nowhere” (Nagel 1986) or a “veil of ignorance” (Rawls 1971) in which each person considers what is best for society irrespective of which member of society they happen to be. Such a perspective suggests valuing everyone equally, regardless of who they are or where or when they live. This in turn suggests a very high value for reducing GCR, or a high degree of priority for GCR reduction efforts.

## 2

#### *CP: the private appropriation of outer space by natural persons is just.*

#### The individual right to property is a basic human right that should be extended to space.

Faires 19 [Wes Faires, “The role of the Universal Declaration of Human Rights in supporting space property rights,” The Space Review, August 5, 2019. <https://www.thespacereview.com/article/3771/1>] CT

A long-discussed issue has been the absence of provisions pertaining to private entities under the 1967 Outer Space Treaty. Interpretations in favor of private property rights hold that the purpose of Article II’s ban on “national appropriation” was to place a limitation on member nations’ attempts to exercise territorial and political sovereignty over any part of outer space: to restrict territorial disputes between countries from extending beyond Earth. Without an explicit prohibition of private property rights in the treaty, their development with respect to private entities is unencumbered. Opposition has fluctuated from the position that the prohibition of national appropriation in Article II served to exclude development of property rights for private citizens: without a national entity with the ability to “confer” or pass down property rights to “sub-national” citizens, forward progress is rendered impossible. There were later attempts to classify private citizens as “nationals” in order to apply to them the prohibition of ‘national appropriation’. The 1979 Moon Agreement places an explicit ban on property for a host of entities, including “natural persons,” until such time as an international regime can be formulated. Two nations, the United States and Luxembourg, have enacted legislation favorable to property and mineral rights regarding space resources. This was met with opposition from some in the international community, who called into question whether such unilateral acts were in and of themselves a violation of the non-appropriation principle of the 1967 Outer Space Treaty. Perhaps in the future, the concept of “property rights” will have evolved beyond the terrestrial concepts of ownership, sovereignty, and territorial acquisition, under a new treaty framework structured by private entities, developed outside the auspices of any nation-state or supranational regime. Until such time, what is needed is a base-level favorable affirmation of private property rights in outer space, one that serves as a foundation for their evolution beyond national borders and which is accepted across the board. To this end, the solution to 50 years of ambiguity regarding private property rights under the under the current UN Outer Space Treaty framework is found within the 1948 Universal Declaration of Human Rights (UDHR), Article 17: (1) Everyone has the right to own property alone as well as in association with others. (2) No one shall be arbitrarily deprived of his property. -UN General Assembly. "Universal Declaration of Human Rights." United Nations, 217 (III) A,1948, Paris, Art. 17 The commercial space sector would welcome language favorable to private property rights in space, with specific emphasis on the re-affirmation of Article 17 as it pertains to property rights for private entities. Beyond Article 17, utilization of the UDHR as a default mechanism in situations where legislation is not yet developed can yield an immediate benefit for humanity. On the national level, the Universal Declaration of Human Rights can be seamlessly integrated into national space policy. Adoption of the UDHR into space policy by state parties to the Outer Space Treaty is essentially a reaffirmation of one of the fundamental principles of the United Nations, and can take place without litigation or implementation of new national legislation, and with no accusation of violation of “national appropriation.” In the international arena, the Universal Declaration of Human Rights can be seamlessly into to conducting legislative proceedings pertaining to outer space, given that: The overarching thematic priority for UNISPACE + 50 and beyond is “Sustainable Development in Space.” A critical aspect of this calls for ensuring the principles of the 2030 Agenda for Sustainable Development are upheld. The 2030 Agenda is grounded in, and re-affirms, the Universal Declaration of Human Rights (A/RES/70/1 para. 10, para. 19). The task at hand is to compel the United Nations Committee on Peaceful Uses of Outer Space (UNCOPUOS) to commit to upholding the Universal Declaration of Human Rights. Solidarity on such a core foundational UN principle as the UDHR solidifies reflection of Agenda 2030. I propose that UN Secretariat take this opportunity to move forward with Sustainable Development, and lead the way in incorporation the Universal Declaration of Human Rights into international space policy. It is time to recognize property rights as the universally declared human right that it is: “Everyone has the right to own property alone as well as in association with others.” The definition of property and scope of the UDHR was not limited to any one definition or territory. The UDHR was intended from the outset to be universal: “It is not a treaty; it is not an international agreement […] It is a Declaration of basic principles of human rights and freedoms, to be stamped with the approval of the General Assembly by formal vote of its members, and to serve as a common standard of achievement for all peoples of all nations.” -Eleanor Roosevelt, “On the Adoption of the Universal Declaration of Human Rights” December 9, 1948 Here in its 70th year of adoption, acceptance of the UDHR into space policy by the international community would be both timely and logical. It reaffirms adherence to a fundamental United Nations cornerstone, and provides an opportunity to strengthen the commitment to the 2030 Agenda for Sustainable Development. At a time when feasibility of extraction of minerals from celestial bodies is fast approaching, it is our responsibility to ensure that the transition occurs free of any terrestrial shackles. The Universal Declaration of Human Rights offers an acceptable foundational framework from which property rights can evolve off-planet, that can be embraced by the private sector, adopted across national levels, and upheld in the international arena

#### The CP protects individual property rights while solving case since the aff still applies to corporations.

#### Absent legally enforced personal rights, like property, space settlements are likely to be dominated by tyrannical governments or corporations. Turns case.

Cockell 08 [Charles S. Cockell (Center for Earth, Planetary, Space and Astronomical Research – Open University, Milton Keynes), “AN ESSAY ON EXTRATERRESTRIAL LIBERTY,” JBIS, VOL. 61, pp. 255-275, 2008. <https://www.researchgate.net/profile/Charles-Cockell/publication/258317782_An_Essay_on_Extraterrestrial_Liberty/links/0c96053053a02cfb24000000/An-Essay-on-Extraterrestrial-Liberty.pdf>] CT

6. EXTRATERRESTRIAL LIBERTY For Berlin [20], ‘negative’ liberty meant the pursuit of individual liberty by removing those mechanisms that exert control over one’s actions. Western liberal democracies pursue, for the most part, philosophies of negative liberty, by attempting to reduce the role of government in individual lives. A restricted sphere of negative liberty is created by tyrannies, in which encroachment into the lives of individuals reduces the number and scope of activities in which people consider themselves free, or at least able to make decisions that can be implemented independently of the State. Of course, by retreating into a core set of activities in which one is completely free, one is in the process of relinquishing liberty, as the scope of free actions is voluntarily reduced. This is in itself a form of slavery. Societies where the scope of negative liberty is reduced can be described as more enslaved, even if the people there may not describe themselves as such, because they have in fact escaped State slavery by retreating from those very activities in which control is exerted. The crucial point is that the sphere within which negative liberty is possible is necessarily constrained by the environmental conditions under which one exists. The more extreme the environmental conditions, the fewer social activities can occur without collective oversight. More saliently, the people themselves may actually request such oversight, to protect their safety from others who would abuse it, with the resulting dangers. Some of these systems of monitoring can be found in societies on Earth. We cannot drive automobiles without safety checks. Our water must be passed through treatment works— life support systems if you will—that ensure that what we are drinking is safe. Indeed, even in some of the most mature terrestrial democracies, a remarkable quantity of basic consumables and resources come to us through systems of compliance overseen by the State. This is a form of control that most people accept because we consider it in our interest. We do not usually see such invasions of our liberty as tyranny, but rather as benevolent actions by the State to ensure our safekeeping. But they are incursions nevertheless, and while democracy is functioning such oversights need not necessarily concern us; or at least they do not worry most of the public, who are more concerned with having fresh water than more abstract thoughts about the allowable extent to which the State should have influence over their water quality. In extraterrestrial environments, spacesuits, water quality, food production, habitat pressurisation and so on and so forth will be subject to regulation by corporations or the State. As on Earth, perhaps many of these incursions will be regarded as acts of beneficence by the State in the interests of safety, and will be willingly accepted. But one fact is undeniable: the extent of negative liberty must be less in extraterrestrial environments than on Earth, and quite significantly less. Even the air will be subject to quality controls and checks. Forms and permissions will be associated with the very act of breathing. No philosophy of advancing the domain of negative liberty, no clever sophistry, can change this truth, which is brought into being by basic survival needs. An undeniable effect will be to expand the opportunities for tyranny. Where the mechanisms for central control are necessarily enlarged in their scope and diversity, a greater number of levers exist, and enable individuals and organisations to exert control and assume power. A reduction in negative liberty does not necessarily imply greater tyranny, but it certainly makes it possible. In extraterrestrial environments, where centralised interventions must be frequent, how much weaker is freedom and how much easier is tyranny to enforce? We cannot know the answers until we undertake the experiment, but we can be fairly sure that the qualitative answer must be ‘more easily’. More insidiously, the restriction of the borders of negative liberty, caused by the apparent need to protect individuals from the irresponsible actions of others, can itself be perpetuated as a form of liberty. The use of alcohol in extraterrestrial environments is one example. On Earth, the excessive use of alcohol may result in broken windows and arrests, but once the windows are repaired little damage has been done to society as a whole. Hence, although there is a negative social collective impact of excessive alcohol use, the prohibition of alcohol consumption of any kind is generally regarded as an infringement of civil liberties that the public will not tolerate. This is why, of course, attempts to do exactly this in the past have been met by black marketeering. But in extraterrestrial environments, a broken window may imply depressurisation, and the instant death of many individuals. The potential impact on society of the irresponsible and thoughtless actions of individuals is greater, and it might seem justifiable to restrict greatly, or even prohibit, the civil liberty of alcohol use, in the interests of collective safety. This principle can be applied to many diverse social interactions that could be construed as threatening people, and the prevention of which can be advanced as the protection of individual and social freedom through the process of restricting negative liberty. Liberty encompasses the freedom that individuals have to actively pursue their own objectives (‘positive liberty’ sensu Berlin). An obvious mechanism by which this becomes practical is the creation of social mechanisms and institutions through which the ‘active’ pursuit of this ‘positive’ sense of liberty is made possible, for example the welfare State. Organisations established to act as conduits for the free expression of different points of view, or to act as means to achieve practical objectives, are not always liberal. Even in some of the most developed democracies, societies and organisations may become dominated by elite closed circles of people, and media channels may be influenced by moguls who use outlets to perpetuate specific corporate views. What prevents these incursions into the structures of liberty from descending into wholesale tyranny? In reality, very little. The subversion of democratic States, or States on the verge of democracy, into societies more reminiscent of dictatorships has many historical precedents. The principal mechanisms that allow individual freedom to triumph over the slide towards tyranny include the legally agreed freedoms that individuals have to establish competition against dominating organisations, and the culture that ensures that the freedom to create organisations is not then abused to destroy the very democratic organisations that guarantee that freedom. In a society in which the freedom to organise and assemble institutions is protected by law, those organisations that distort and alter their environments, or the information they propagate, are likely to be usurped by institutions that reflect a different style of thinking, by the process of individual choice. However, these alternative visions can only be effective, and one can only assert them over the prevailing opinions with confidence, when one has sufficient information to be confident of their likely veracity. On Earth, to express many ideas and counter-opinions one does not need supreme confidence in the truth. If one’s opinion turns out to be in error one gives up, accepts the viewpoint of the adversary and continues one’s life. These opportunities to challenge, however, are central to the power of the individual to confront institutions. But there is one social situation in which the individual’s power is markedly reduced, even rendered completely ineffective against a collective body. Health and safety is one of the most effective levers of social influence and justified coercion, because it invokes the protection of people confronted with life and death situations. Consider, for example, an oxygen supply system on the Moon. The authority that runs such a system might seek control over a political dissenter by threatening to move him or her and their family to a new zone of habitation, on the grounds that the oxygen supply to their habitat is faulty. By doing this, they will remind these individuals who is in control of their survival, and coerce them through fear into mitigating their dissent, thereby creating a more malleable individual and reducing the challenge to collective authority. Governing organisations have access to a vast realm of information that no single individual can hope to have [21]. They know, for example, about the oxygen demand, its rate of supply, the pipes that supply it, the maintenance history of the oxygen producing machines, and so on and so forth. For an individual to declare that the intention of the authority to move them to another habitat is for controlling political purposes, he or she must also have access to all such information, which they can then use to demonstrate that there is no safety concern. If they do not have access to this information, then it becomes a simple task for the authorities to portray them as dishonourable individuals inveighing against the hard work of other individuals who are working to secure their individual safety and the security of society [22]. They can be then be ostracised, and their general behaviour will be treated as disingenuous. However, to have access to all the information to convincingly uphold a complaint is never possible, because an individual can never know whether they are missing a single crucial fact that makes all the difference to their safety. Even armed with what they perceive to be all the information available, the individual is faced with a choice between allowing an incursion on their home and liberty, or taking the risk that their presumption of having full information is correct. Faced with such a choice, the individual is likely to opt for the former in the interests of caution, particularly in an environment where the other choice may imply death from a failed oxygen system. In the extreme case, this first course of action would be further reinforced in a particularly coercive, venal society where the individual might even be convinced of the capability of the authorities to engineer the failure of their oxygen system and their death, in order to crush dissent, even if their complaint was in fact justified. The end point of this process, when applied across many activities in life, is a colony of automatons performing tasks for an extraterrestrial authority, with their freedom reduced to a withered core of activities in the most private confines of their habitats. Extraterrestrial environments make such an endpoint not merely a possible outcome, but a likely one. This attack on liberty is made possible because the pursuit of individual safety can be made an unchallengeable requirement of a ‘free’ society [23]. Freedom from instantaneous death caused by the external environment is the common freedom on which all individuals should converge, and any social structure or plan that brings people closer to that reality must surely be praiseworthy? The removal of other freedoms to achieve the safety of society is excusable. From this position, the environment can itself become the instrument of positive liberty. In this way, and in a rather unique way, encroachment on freedom of thought and movement, in the interests of ensuring the protection of the freedom of the individual against the lethality of the environment, can be transformed into a justifiable and universalisable doctrine of control [24]. Unfortunately this approach receives succour from every major tradition of social philosophy that we know on Earth. From Grotius to J.S. Mill, the right to self-preservation has been considered the core of individual liberties [25], a point beyond which no State may go, and which every individual has the right to take it upon him or herself to secure—indeed, such a notion has even been referred to as a ‘natural law’ [26]. Even Hobbes’ view of the necessity of sovereign control [27] turns on the right of each individual in a fight to preserve themselves. It is possible to spend much of one’s life on Earth without undue concern for self-preservation. Apart from those unfortunate individuals who confront a burglar or gang, most people will not actually come face to face with the need to infringe others’ rights to self-preservation. Fortunately, although the right to self-preservation is theoretically an unchallengeable right of all people, it remains, in a civil society, one sufficiently protected by the laws, and by regulations against various street crimes that might infringe self-preservation. If, as has been traditional on the Earth, the right to selfpreservation is also held to be a basic right of all people in extraterrestrial environments, then the keys to despotism are handed over to those in control of society. Self-preservation is threatened on a day-to-day basis by the lethality of the environment. In such an environment, each individual does indeed represent a much greater threat to every other individual than on the Earth, because unpredictable and criminal actions against the infrastructure represent a continuously present and potentially catastrophic threat to self-preservation. The authorities therefore have the excuse to implement draconian systems of control to protect the right of every individual to self-preservation. Worse than this, however, the people will voluntarily, in exercising their right to selfpreservation, and to protect themselves, accept more farreaching control over the lives of others [28]. Where death is a more likely outcome of criminal action, the Hobbesian State of nature, and the tendency to vigorously guard against it, becomes a more tangible reality [29].

#### Property rights are the essential building blocks of a fully inclusive and functional government. Turns case since they envision a democratically governed space that is impossible without appropriation.

UNDP ’08 - Working Group on Property Rights, 2008, 'Empowering the Poor Through Property Rights', in Making the Law Work for Everyone Volume II, Commission on Legal Empowerment of the Poor, United Nations Development Programme, New York, pp. 63-128 <https://www.mercatus.org/system/files/ch2.pdf> AT

This transition has reduced global poverty substantially, but as outlined above, billions of people around the world still lack secure property rights, which hinders their economic, political and social security. In order to examine how poverty can best be relieved, and why access to property rights is fundamental to the empowerment of the poor, it is necessary to identify building blocks of a fully-functional property system. Such a system operates in the following four ways: 1) As a system of rules that defines the bundle of rights and obligations between people and assets.15 Property ownership creates ties that bind individual citizens together through the formation of networks of economic and legal rights and corresponding obligations. The credible enforcement of these rights and obligations requires a judicial mechanism that allows for equitable, transparent and efficient dispute resolution. 2) As a system of governance. Property systems are a central facet of state functionality, and as such are an important measurement of fiduciary and administrative effectiveness. The institutional order of the state is based on technical rules and relationships which define interactions between stakeholders, ranging from direct ownership of land to promulgation of rules that govern security of land and house tenure, land planning, zoning, taxing and other aspects of property management. Technological innovation, which has radically reduced the cost of information, has generated the possibility for further transparency and accountability in property systems as an instrument of governance. 3) As a functioning market for the exchange of assets. A fully functional property system allows land, houses, moveable property, equity shares, and ideas to be transformed into assets to be bought and sold at rates determined by market forces. This subjects the exchange of property to a level of transparency and accountability, and allows for the development of financial mechanisms — including credit 67 and insurance — to facilitate transactions and improve economic outcomes. Land, houses and moveable property can thus be leveraged, and assets transformed from static investments into capital which can be bought and sold. However, property rights are a necessary but not sufficient precondition for the development of these financial mechanisms; they also develop through partnership between the market, special funds targeted at access to finance, and the state. 4) As an instrument of social policy. In the absence or failure of the market, the state often plays a direct role in addressing the needs of the poor. The state has at its disposal instruments that can be used to endow its citizens with assets as they relate to property, such as public housing, low interest loans and the distribution of state land. Such instruments help to overcome natural competition for assets. The state also supports social cohesion through the development of co-ownership of infrastructure and services by government and the citizen, supporting the equilibrium between individual and collective interests. Provision of infrastructure by the state critically affects the value and desirability of assets, and can therefore fundamentally affect opportunities for the poor.

#### Impact is Democide – Empirically, murder by tyrannical governments is the biggest impact. It outweighs war and cap. There is a direct relationship between the lack of personal freedom and democide.

Wayman 17 summarizing Rummel [Wayman F.W. (2017) Rummel and Singer, DON and COW. In: Gleditsch N. (eds) R.J. Rummel: An Assessment of His Many Contributions. SpringerBriefs on Pioneers in Science and Practice, vol 37. Springer, Cham. <https://doi.org/10.1007/978-3-319-54463-2_9>] CT

At Rummel’s website, the dominant theme is that power kills (http://www.hawaii.edu/powerkills/). As he began one of his books (Rummel, 1994: 1), ‘Power kills; absolute power kills absolutely. This new Power Principle is the message emerging from my previous work on the causes of war and from this work on genocide and government mass murder … The more power a government has, the more it can act arbitrarily.’

A major supporting idea is the term regime, as operationalized by Rummel (1995) and used as the organizing principle for his datasets on ‘democide—genocide and mass murder’ (Rummel, 1998: 1). This idea of a regime is important to his work because there is a lot of variation from regime to regime in the regime’s amount of power, and also in the number of people the regime kills. And Rummel’s dominant theme is that those two characteristics of a regime (power and deaths) co-vary. In my own ordinary language, a regime is a type of government controlling a state apparatus. As Rummel (1995: 9) says, ‘The changes from the Kaiser monarchy to the Weimar Republic to Hitler’s rule … give us three different German regimes. … I count 432 distinct state regimes during the period from 1900 to 1987’. Hence, there would be the czarist regime in Russia until 1917, and then the communist regime from 1917 to 1991. Between February and October 1917, there should I think be a transition period and transitional regime (under Kerensky). Individual rulers, such as general secretaries Stalin, Khrushchev, and Brezhnev, and their governments, do not represent distinct regimes of their own, but instead are all leaders, successively, of different administrations in the communist regime.

To me, Rummel’s (1983) article made the first really convincing case for the inter-liberal or inter-democratic peace. I have since challenged thousands of people, from classrooms to conferences where I am speaking, to name any other proposition in the social sciences that is surprising or counter-intuitive, and that has (according to its advocates at least) no exceptions. No one has ever been able, in my presence, to name such a proposition—other than Rummel’s.

The COW Project generated the data for the bulk of the hypothesis tests in IR for decades (Wayman & Singer, 1990: 247–248). And ‘realist theory informed 90% of the hypotheses tested by IR scholars up to the 1970s’ (Walker, 2013: 148). It was a bit of a shock that an anti-realist hypothesis, the inter-democratic peace, had produced such a paradigm-shattering result. Sadly, I never heard Singer say a good word about Rummel’s studies confirming the inter-democratic peace hypothesis. Rummel had used COW data on wars, plus other people’s data on democracy, Liberalism, and freedom of nations, to contradict one of Singer’s claims (namely, Singer’s contention that the inter-democratic peace was based on too few cases and too flawed in other ways to be taken to be true; Small & Singer, 1976). Deciphering Singer’s true position on this is complicated. When Geller & Singer (1998) produced a literature review of scientific studies of international conflict, while they did caution that the evidence is ‘not indisputable’, they did acknowledge that ‘the evidence in the area of the joint freedom proposition is consistent and cumulative. Democratic dyads are less likely to engage in war than are non-democratic pairs’ (Geller & Singer, 1998: 87–88). But on the other hand, on his own at his weekly COW seminar, Singer was much more skeptical about the inter-democratic peace. So it is not surprising that, four years after Geller & Singer’s assessment, one of Singer’s students, Henderson (2002) wrote a book that constituted an attack on the democratic peace literature. In the opening paragraph, Henderson says, ‘It struck me as strange that one of the doyen of the behavioral revolution would be such an avid critic of what some scholars hail as the closest thing to an empirical law in the field’.

Instead, Singer seemed more interested in the international or interstate system. While Waltz (1979: 94) defined ‘international political structures in terms of states’, Singer spoke of ‘the national state as level of analysis’ (Singer, 1961: 82–89). Thus, whereas Waltz writes of a system whose basic units are sovereign states, Singer ends up with two systems: an inter-state system and an international system. The international system consists of entities that have an international political goal (including … state creation or survival), engage in international political behavior (including inter-state or extra-state conflict, alliances, trade, or international organizations), or engage in political behavior that has international consequences (such as civil wars). The [international] system … includes … terrorist groups (Sarkees & Wayman, 2010: 27).

Nested within this international system is the interstate system, beginning in 1816, distinguished in terms of ‘recurring international interactions between and among the interstate system members’ (Sarkees & Wayman, 2010: 16). Singer’s COW data are organized around a focus on state system membership. Basically, between 1816 and 1919 an entity is a state system member if it has 500,000 people or more and is diplomatically recognized at an adequate level by Britain and France, while after 1919 it is a state if it is a League of Nations or UN member or has 500,000 people and diplomatic recognition by two major powers. (Note that ‘state’ becomes a short-hand for ‘state system member’; Bremer & Ghosn, 2003.)

Much confusion results from the short-hand expressions ‘state’ and ‘system’. ‘Whenever the word “system” was used without a modifier, Singer & Small were referring to the interstate system’ (Sarkees & Wayman, 2010: 16). Likewise, the ‘states’ whose characteristics are listed in the COW datasets are not the population of states, but the population of state system members.

Singer’s most widely-cited explanatory articles on interstate war are probably Deutsch & Singer (1964) and Singer, Bremer & Stuckey (1972). Both operate at the system level of analysis. It may be that Singer’s devotion to the interstate system is part of what made him reluctant to embrace the inter-democratic peace. As he said in another widely-cited article, the international system level of analysis ‘almost inevitably requires that we postulate a high degree of uniformity in the foreign policy codes of our national actors’, and ‘the system-oriented approach tends to produce a sort of “black box” or “billiard ball” concept of national actors’. This is consistent with his foreign policy instincts, which were loath to attribute ‘white hats’ to the ‘free world’ and ‘black hats’ to the Soviet Union, in the assigning of blame for the dangers to world peace in the Cold War era. Singer’s posture was very different from Rummel’s, with Rummel in favor of Reagan’s foreign policy and against détente. In these Cold War contexts, Singer may have been uncomfortable with Rummel’s summary that ‘freedom preserves peace and life’.

Singer wrote ‘it is evident that my research and teaching has unambiguously been problem-driven’, and ‘for reasons that I struggle to articulate, the problem has been, and remains, that of war’ (Singer, 1990: 2). The COW Project was founded by him at the University of Michigan in 1963, the year after the world nearly was destroyed, had the Cuban Missiles Crisis gone badly. International war attracted Singer’s best efforts at finding the ‘causes of war and conditions of peace’ (1990: 3). As he and Small put it, their focus is a ‘preoccupation with the elimination of international war and the possible role of solid explanatory knowledge in that enterprise’ (Small & Singer, 1982: 17). The first COW war handbook, Wages of War (Singer & Small, 1972) was consequently limited to international wars. Karl Deutsch subsequently convinced Singer that there was a need for a comparable list of civil wars. This led to a new handbook, Resort to Arms: International and Civil Wars, 1816–1980, presenting a ‘comprehensive list that will enhance … study of civil wars’ (Small & Singer, 1982: 204). The civil war list is accompanied with a cautionary note, ‘International war remains our major concern … A research assault on [explanation of] civil war … is clearly a task better left to others’ (Small & Singer, 1982: 17). Consequently, the COW project had many datasets (such as the Militarized Interstate Dispute dataset) on the correlates of interstate war, but nothing comparable on the civil war data. Nevertheless, the publication of the civil war data was a valuable contribution to studies of civil war, and was also a step toward the full delineation of the totality of modern war. This was followed, in the third COW handbook (Sarkees & Wayman, 2010) with a definition and list of non-state wars, completing the full reckoning of the patterns of war in the past two centuries. Also, the focus of Singer on international war was somewhat vindicated by his co-authored article revealing that, over the time since the Congress of Vienna, inter-state wars had resulted in 32 million battle deaths, intra-state wars only 18 million (Sarkees, Wayman & Singer, 2003).

Critics often ask if the COW project has a state-centric bias. A more subtle and I think effective line of inquiry is to ask why the COW project has emphasized state-system-membership rather than simple sovereignty and independence as the defining characteristic of the state. This can cause confusion. For example, a number of non-state wars, including the main phase of one of the deadliest wars in history, the Taiping Rebellion, have been fought in areas that would be considered to be states by students of comparative politics. This and other related difficulties have led pioneers outside the COW project (Gleditsch, 2004; Fazal, 2007), as well as Singer’s successor at the COW Project (Bremer & Ghosn, 2003) to propose various revisions and expansions of the concept of the state, to go beyond the COW state membership definition. These difficulties and challenges continue to provide important frontiers for research on war and the state in coming years.

In contrast to Singer, Rummel seems to me to have taken a more inductivist, practical approach to states and similar entities. On his website, powerkills.com, one finds a focus on killing, even of one person. The perpetrators are often leaders of totalitarian states, such as Mao, but can also be rebel leaders (the young Mao) or a king (Leopold of Belgium) who controls what some call a colony (the Belgian Congo) but Rummel calls Leopold’s personal property. The unit of analysis becomes the regime and regime-like power-centers such as Leopold’s Congo or Mao’s rebel territory.

Rummel (1986) concluded that ‘War isn’t this century’s biggest killer’. As he said then, ‘About 35,654,000 people have died in this century’s international and domestic wars, revolutions, and violent conflicts. … The number of people killed by totalitarian or extreme authoritarian governments already far exceeds that for all wars, civil and international. Indeed, this number already approximates the number that might be killed in a nuclear war’. He itemized 95 million killed by communist governments, but only ‘831,000 killed by free democratic governments’. Those killed by free democratic governments were always foreigners:

In no case have I found a democratic government carrying out massacres, genocide and mass executions of its own citizens … Absolutist governments (those that Freedom House would classify as not free) are not only many times deadlier than war, but are themselves the major factor causing war and other forms of violent conflict. They are a major cause of militarism. Indeed, absolutism, not war, is mankind’s deadliest scourge of all. In light of all this, the peaceful, nonviolent fostering of civil liberties and political rights must be made mankind’s highest humanitarian goal … because freedom preserves peace and life (Rummel, 1986).

## 3

#### The appropriation of outer space is unjust except for appropriation for space-based solar power.

#### SSP is viable and requires privatization.

Oberhaus 8/18 [DANIEL OBERHAUS, “Space Solar Power: An Extraterrestrial Energy Resource For The U.S.,” Innovation Frontier Project, August 18, 2021. <https://innovationfrontier.org/space-solar-power-an-extraterrestrial-energy-resource-for-the-u-s/>] CT

FUTURE OF SSP

The United States’ reluctance to pursue SSP can be attributed to a number of causes. In the 1970s and 80s, the exorbitant projected costs of an SSP station guaranteed that the project would not be pursued by NASA, the DOE, or the DOD. At the same time, the agency’s emphasis on developing nuclear space technologies — a trend that continues to this day — undermined enthusiasm for other ambitious energy projects like SSP. Finally, the fact that SSP is a space project meant to provide commercial levels of electrical power on Earth meant that it wasn’t obvious whether it fell within the purview of NASA or the DOE, and so both agencies were reluctant to allocate a substantial portion of their budget for its development. Today, the low cost of natural gas and renewables like wind and solar makes it seem challenging to justify a space energy project of this scale. But SSP offers several unique benefits as an energy resource, including its resiliency, its ability to provide flexible baseload power to geographically distant locations, its capacity to accelerate decarbonization directly by providing clean energy and indirectly by expediting the transition to off-world heavy industry, and its strategic benefits as a tool for diplomacy and national security. Given SSP’s benefits and the interest in the technology from most other space agencies, it’s puzzling that policymakers in the United States have not prioritized SSP R&D. The development of key technologies such as reusable rockets and thin film solar panels has finally made SSP economically and technically viable. But there is still a lot of fundamental research on SSP that needs to be done and it is in the United States’ national interest to begin this research program as soon as possible. So far, the only glimmer of hope for an American SSP program has come from the DOD’s efforts. In 2019, the Air Force Research Lab awarded a $100 million contract to Northrop Grumman as part of the new Space Solar Power Incremental Demonstrations and Research (SSPIDR) Project, which aims to develop hardware for in-orbit SSP experiments based on the design developed at Caltech.105 This is by far the United States’ largest federal expenditure on SSP R&D, but it is only a fraction of what will be required to build a large-scale SSP station and the specific technologies included in the SSPIDR program will not result in a system that could ever provide commercial power to civilians. SSP is a key tool for ensuring the prosperity and security of the United States in the latter half of the 21st century. It is imperative that NASA and the DOE prioritize the development of SSP. We believe the federal government should earmark approximately $1 billion for SSP research over the next five years with a special emphasis on advancing emerging technologies and in-space hardware demonstrations. Congress must take the first step in establishing a civilian SSP platform by directing NASA and the DOE to collaborate on a public-private initiative similar to NASA’s commercial crew program or its more recent commercial lunar payload services program. The directive must clearly delineate responsibilities between the agencies in order to avoid leadership paralysis that has stymied domestic SSP research in the past. Furthermore, a public-private program must be structured so that there is competition among multiple private companies, which must hit key milestones in order to continue receiving contracts. These contracts should be awarded with a fixed-price structure to avoid the massive cost overruns and delays that are typical of cost-plus contracts in the aerospace and defense sector. This is also an approach likely to find support among new launch providers and spacecraft manufacturers that have demonstrated the innovation that occurs when operating within the relative constraints of fixed price contracts. In fact, the main trade group for the aerospace sector has advocated for the increased use of fixed-price contracts in the past.106 Alternatively, it may be more efficient to establish a focused research organization (FRO) dedicated to SSP technologies to avoid delays associated with collaboration between two federal agencies on multi-year—and perhaps multi-decade—projects. FROs are independent entities that exist outside of national laboratories and universities. They are effectively a startup for basic research and deep technological development that requires large-scale engineering collaboration on technologies that may not yet have a market or are not readily monetizable.107 Recently, the U.S. Congress created five FRO-like centers in the DOE’s national labs as part of the National Quantum Initiative Act, which can serve as a framework for the creation of similar FROs dedicated to space solar power.108 While there are several approaches to a large-scale SSP system, we believe the most fruitful pathway is to focus on cost reduction over energy efficiency. This would prioritize highly modular systems similar to ALPHA, which benefit from the substantially reduced costs of mass manufacturing standardized components. We believe that it is possible to conduct a civilian SSP demonstration in low-Earth orbit within three years of the program’s start with less than $250 million in funding. The first phase of this program would involve conducting a series of ground tests with prototype systems over the course of about 18 months. Based on the results of this program, a system could be selected for an in-space demonstration capable of generating up to 300kw of power in low-Earth orbit. After a successful LEO demonstration mission, the next step would be to build a larger SSP system in mid-Earth orbit capable of producing commercial amounts of power (e.g., 1-10 MW). While this orbital altitude is not sufficient for maintaining the SSP system over a fixed spot on the Earth, it would stay on a fixed path so that it always passed over the same spots on the Earth. While the power from this MEO demonstrator would not be competitive with terrestrial electricity prices — we expect a cost of about $1/kwh — it would be a critical step toward proving the system’s ability to provide commercial power. We expect that the MEO demonstrator could be built and launched for approximately $1 billion. The success of the MEO demonstrator would lay the foundation for an SSP system in geostationary orbit that would be large enough to provide meaningful amounts of baseload power. We expect the initial version of this SSP system to be capable of delivering around 2 GW of solar energy to the surface. We expect that a 2 GW SSP system in geostationary orbit could be built for about $10 billion. Here we start to see the cost savings of mass manufacturing modular SSP components. This system would be capable of delivering more than 200 times more power than the MEO demonstrator for only 10 times the cost. We believe that a public-private SSP program jointly led by NASA and the DOE could result in a commercially viable SSP platform in geostationary orbit by the end of the decade. In addition to providing a critical pathway for SSP, it also has the potential to lead to substantial advancements in solar power and wireless power transmission technologies that would be useful on Earth. If policymakers do not take action on advancing domestic SSP capabilities soon, the United States will find itself losing its leadership position in space and increasingly vulnerable to natural and human-made disasters on the ground.

#### SSP Constellations are coming now. SSP is technologically and economically feasible. Bests studies prove.

Patel 12/1 [Sonal Patel, “Space-Based Solar Power May Be Closer Than You Think,” POWER, 12/1/21. Accessed 2/16/22. <https://www.powermag.com/space-based-solar-power-may-be-closer-than-you-think/>] CT

The vision sounds far-fetched: If a kilometer-scale satellite could be outfitted with a hybrid array of photovoltaic (PV) and concentrating solar power (CSP) panels and launched into orbit 22,400 miles above Earth, it could continuously harvest 3.4 GW of solar power and beam it down to Earth via microwave radiation for grid consumption, potentially delivering 2 GW of dispatchable and baseload power. But according to a “whole systems” set of detailed engineering and economic feasibility studies conducted by systems, engineering, and technology-oriented Frazer-Nash Consultancy for the UK government, this concept of a typical space-based solar power (SBSP) system is both technically and economically feasible—and it can be achieved within the next 18 years.

While still at an early stage of technical maturity, SBSP systems research and development has progressed steadily since the 1970s, spearheaded by several government space programs, including in the U.S., Japan, China, South Korea, and the European Union. And while it has existed for more than a century—it derives from Nicolas Tesla’s grand vision for wireless power transfer (WPT)—the world’s white-knuckle fight against climate change in the context of energy security, affordability, and scalability is making SBSP an extraordinarily attractive pursuit, noted Martin Soltau, lead of Frazer-Nash’s Space business, and a lead developer of the report for the UK government.

UK Actively Exploring Space-Based Solar Power Systems

“It can provide baseload power but it can also provide this dispatchable power,” said Soltau, who notably also co-chairs the Space Energy Initiative, a UK-based alliance of research and commercial energy, space, materials, and manufacturing entities that are dedicated to space power delivery by 2050. “But then it’s got these other real exciting advantages,” Soltau told POWER at the end of September as the UK’s Department for Business, Energy, and Industrial Strategy (BEIS) endorsed the SBSP feasibility studies. “It doesn’t produce waste, it doesn’t have problems with fuel supply, it’s very environmentally clean, and the carbon payback is very short,” he said.

Also notable is that SBSP’s “extra-terrestrial” footprint—which essentially only requires a receiving antenna and a conversion facility—is also “much smaller, only a third of the size compared to terrestrial solar, and only about 3% of the size of an equivalent wind farm,” Soltau said. As uniquely, “it is possible to beam energy to other parts of the world,” opening up new international collaboration to net-zero, potentially helping developing nations to decarbonize, and even shaking up traditional power markets.

The Frazer-Nash Consultancy study is especially significant because it represents one of the world’s first “whole system” space power-based independent assessments. The UK’s interest in space power stems from an economic opportunity to establish a foothold in rapidly burgeoning civil and defense space activities around the world, essentially boosting private investment, and capitalize on its unique engineering and manufacturing strengths, like satellite manufacturing. But Soltau said the study, which stems from a government-sponsored innovation “competition,” could also offer international insight through its stakeholder-reviewed findings, which were gleaned over a six-month period and encapsulated two phases: one focused on technical opportunities and challenges, and the other on costs.

In its study, Frazer-Nash recommended that the SBSP system concept be established to define user and system requirements, which would ultimately align more focused research activities. The UK government told POWER that as a next step, it is already exploring how it can potentially support innovation in the development of these “dual-use” space power and terrestrial power systems.

A Gigawatt-Scale Baseload Solar Plant on a Satellite

Still, the undertaking is markedly broad. As part of its engineering study, Frazer-Nash proposed a “typical” SBSP system based on three leading concepts, which it chose as reference designs for its investigation. The typical system comprises a massive kilometer-scale satellite that would be launched to Geostationary Earth Orbit (GEO, about 36,000 kilometers above a point on the Earth) to enable gigawatt-scale generation.

“At this altitude, the Sun is visible over 99% of the time,” it noted. The satellite harvests solar power using large lightweight solar panels, often with a system of mirrors to reflect and concentrate sunlight onto the panels (Figure 2). That generated power is then converted into microwave radiation and beamed—in a “safe” frequency of 2.45 GHz and intensity 230 W per square meter (which is one-quarter of the intensity of midday sunlight)—to a rectifying antenna (or “rectenna”) on the ground. The ground rectenna then converts the electromagnetic energy into direct-current electricity, which can be converted and transformed to provide power to the grid with acceptable characteristics.

Significantly, the concept envisions a complete system that would comprise a “constellation” of such satellites with a combined 10 GW capacity. However, the study also embeds the core generating system into a larger power study that includes “enabling systems,” such as spacelift, control station construction, ground station maintenance, and even potential legislation, permits, international agreements, and standards.

According to Soltau, the study concluded that leading satellite power concepts do not require any substantial advance in materials’ technology or performance, but building them economically will require two principal capabilities that are today immature but rapidly developing: robotic in-orbit assembly, and a low-cost reusable space transportation infrastructure. This poses a “substantial undertaking,” he noted, given that the size of the system, and the need to assemble and integrate them in space, “would be an order of magnitude larger in mass and extent than any spacecraft currently in orbit.” Key to achieving the scale and ambition of the system will be to address the “considerable engineering risk” through a program of design and technology demonstration, he said.

Costs Competitive with Cheap Earth-Based Renewables

The study also identified an array of technical challenges, from maintaining the angle between the sun-pointing solar collector and the ground-pointing microwave transmitter, to the size and scaling of the microwave antenna. Optimizing the specific power of SBSP satellites—which have a mass of several thousand tons—and managing their components’ thermal aspects will also be crucial.

Finding an optimum choice of power beaming frequency will also “require a trade-off between the satellite orbit, satellite sizing, power level transmitted, power beaming efficiency, the transmitter diameter and receiver diameter, the thermal limits on the sandwich panel, and the upper safe limit of Radio Frequency (RF) intensity at the center of the received beam,” the study acknowledges. Keeping frequencies at 2.45 GHz for larger (2 GW) systems, and 5.8 GHz for lower-power, lower-mass systems, may be a good guideline, it concluded.

The given technical challenges (and scope of engineering risks), the relatively low technical maturity of several technologies, and the diversity of technical concepts that have been proposed pose a long list of methodology limitations when assessing SBSP costs, the study acknowledges. However, by developing a “bespoke cost model” that addresses uncertainty and focuses only on the CASSIOPeiA design, the study concludes that a typical SBSP could deliver a levelized cost of electricity (LCOE) of between £35 ($47)/MWh and £79 ($107)/MWh, assuming a successful development program.

The cost analysis included “end-to-end production, launch, assembly, operational service life, and decommissioning,” Soltau noted. “The LCOE we calculated is for the nth of a kind, which would be quickly reached in the fourth or fifth system,” given the modularity and repeatability of the design, he said. “Each solar power satellite is highly modular, so you reduce production costs when you’ve got high production runs,” he said.

Assuming a system is commissioned in 2040, the LCOE at the midpoint of £50/MWh “includes this very high hurdle rate of 20%” to account for estimated uncertainty as required by institutional investors, he noted. “And what you’d expect is as the development proceeded, and we matured the technology, and all the development risk was retired, that the hurdle rate is going to fall well under 10%. At a 10% hurdle rate, the LCOE is only £26/MWh—that’s cheaper than the cheapest renewable technology in the UK at the moment,” he said. “This is why our government is excited because it’s actually looking not only at the technology’s great characteristics, but it’s actually very affordable as well.”

Still, for now, to propel research and development, the UK government is looking at a net present value—a representation of overall development costs—of about £16.3 billion ($22.1 billion), the study suggests. Another £1 billion will also be necessary to support operating expenditure over the life of the system.

In its policy roadmap, however, Frazer-Nash suggests the public sector may only need to fully fund Phase 1, totaling £350 million ($474 million) over the first five years. “Thereafter the private sector could reasonably be expected to start investing an increasing proportion as shown,” it says. As an incrementally valuable benefit, the program would potentially provide “broader spillover economic benefits,” including in areas that span wireless power transmission, semiconductor technology, PV technology, space-grade electronics, robotics, space freight and transportation, and general skill development to support space activities, it said.

#### SSP solves warming. In the short term provides cheap, renewable, and flexible baseload power for on and off-world applications. It’s also key to transition heavy industry to space.

Oberhaus 8/18 [DANIEL OBERHAUS, “Space Solar Power: An Extraterrestrial Energy Resource For The U.S.,” Innovation Frontier Project, August 18, 2021. <https://innovationfrontier.org/space-solar-power-an-extraterrestrial-energy-resource-for-the-u-s/>] CT

EXECUTIVE SUMMARY

What is often left unsaid in discussions about extraterrestrial industrialization and deep space settlement is how to supply the energy needed for large scale infrastructure projects. Nuclear energy has long been the power source of choice for deep space missions.2 This is largely because nuclear power systems can operate for decades without intervention and in locations where there is limited or non-existent sunlight. But nuclear energy is limited in its ability to scale and also creates serious health hazards for near-Earth operation.3 In this paper, we make the case for space-based solar power (SSP) megaprojects as relatively low-cost, scalable, renewable, and always-on power source for on-and-off world applications. Although SSP is a space-based energy asset, it has the potential to rapidly accelerate decarbonization on Earth while also fulfilling space exploration priorities. SSP is a decades-old idea that has only recently become economically viable due to the rapidly falling costs of space access and technological advancements such as higher efficiency electronics, low-cost mass-production of modular space systems like satellites, robotic in-space construction, and wireless power transmission. NASA, the Department of Energy, and several other research agencies have conducted in-depth studies and limited experiments on SSP, but the development of this energy resource was hindered by unfavorable economics. Things have changed and it is time to reconsider SSP as a valuable tool in the nation’s decarbonization strategy. This paper shows how the development of SSP can serve several national imperatives at once. In space, it can provide a renewable and cost-effective source of energy for moon bases and deep space missions. SSP can also provide a valuable source of energy — both electric and thermal — for industrial processes in cislunar space. This will facilitate the transition of heavy industry from Earth to space, which will mitigate carbon emissions in the medium-to-long term on Earth. Critically, SSP will have a massive impact on terrestrial greenhouse gas (GHG) emissions in the near term through wireless energy transfer from space to Earth. This is SSP’s original “killer app,” and multiple studies have shown that SSP can meet a substantial portion of Earth’s energy needs. Unlike terrestrial solar power, SSP is always on. It can provide solar power rain or shine, day or night. It is also flexible and can be quickly redirected to ground stations in geographically distant locations to meet rapidly changing energy needs. The dream for SSP is to have a source of clean baseload energy that’s available regardless of weather, location, or time of day. The baseload is the minimum electrical energy demand on a grid, which has historically been provided by power stations that are able to generate large and relatively constant amounts of energy. But as more renewables penetrate the grid and create fluctuations in electric supply, the base load power stations of the future must be flexible enough to rapidly ramp up and down to meet the evolving supply and demand dynamics of the grid. Much like the advent of GPS, a robust SSP capacity would have profound geopolitical implications. China is investing heavily in SSP and plans to have the first operating SSP plant in orbit by the end of the decade.4 The Department of Defense (DOD) is also pursuing SSP research for military applications. Notably, the Air Force Research Laboratory recently created a $100 million program to advance key SSP technologies.5 This paper concludes that the U.S. must allocate substantially more human and financial capital to SSP as part of its national security, domestic energy, and space exploration strategies.

#### Solving warming is not all-or-nothing – every additional fraction of a degree is irreversible and costs millions of lives—prefer IPCC assessments that are the gold standard for warming consensus.

David Wallace-Wells 19 [National Fellow at New America. He is deputy editor of New York Magazine, where he also writes frequently about climate and the near future of science and technology, including his widely read and debated 2017 cover story on worst-case scenarios for global warming], *The Uninhabitable Earth: A Story of the Future* (Kindle Edition: Allen Lane, 2019), pg. 8-30, beckert

* Every degree key – each bit 🡪 hundreds of millions of lives
* IPCC🡪best ev b/c conservative estimate + still really big impact
* Now key – not reversible, feedback loops 🡪 speeds up later

There is almost no chance we will avoid that scenario. The Kyoto Protocol achieved, practically, nothing; in the twenty years since, despite all of our climate advocacy and legislation and progress on green energy, we have produced more emissions than in the twenty years before. In 2016, the Paris accords established two degrees as a global goal, and, to read our newspapers, that level of warming remains something like the scariest scenario it is responsible to consider; just a few years later, with no single industrial nation on track to meet its Paris commitments, two degrees looks more like a best-case outcome, at present hard to credit, with an entire bell curve of more horrific possibilities extending beyond it and yet shrouded, delicately, from public view.28 For those telling stories about climate, such horrific possibilities—and the fact that we had squandered our chance of landing anywhere on the better half of that curve—had become somehow unseemly to consider. The reasons are almost too many to count, and so half-formed they might better be called impulses. We chose not to discuss a world warmed beyond two degrees out of decency, perhaps; or simple fear; or fear of fearmongering; or technocratic faith, which is really market faith; or deference to partisan debates or even partisan priorities; or skepticism about the environmental Left of the kind I’d always had; or disinterest in the fates of distant ecosystems like I’d also always had. We felt confusion about the science and its many technical terms and hard-to-parse numbers, or at least an intuition that others would be easily confused about the science and its many technical terms and hard-to-parse numbers. We suffered from slowness apprehending the speed of change, or semi-conspiratorial confidence in the responsibility of global elites and their institutions, or obeisance toward those elites and their institutions, whatever we thought of them. Perhaps we felt unable to really trust scarier projections because we’d only just heard about warming, we thought, and things couldn’t possibly have gotten that much worse just since the first Inconvenient Truth; or because we liked driving our cars and eating our beef and living as we did in every other way and didn’t want to think too hard about that; or because we felt so “postindustrial” we couldn’t believe we were still drawing material breaths from fossil fuel furnaces. Perhaps it was because we were so sociopathically good at collating bad news into a sickening evolving sense of what constituted “normal,” or because we looked outside and things seemed still okay. Because we were bored with writing, or reading, the same story again and again, because climate was so global and therefore nontribal it suggested only the corniest politics, because we didn’t yet appreciate how fully it would ravage our lives, and because, selfishly, we didn’t mind destroying the planet for others living elsewhere on it or those not yet born who would inherit it from us, outraged. Because we had too much faith in the teleological shape of history and the arrow of human progress to countenance the idea that the arc of history would bend toward anything but environmental justice, too. Because when we were being really honest with ourselves we already thought of the world as a zero-sum resource competition and believed that whatever happened we were probably going to continue to be the victors, relatively speaking anyway, advantages of class being what they are and our own luck in the natalist lottery being what it was. Perhaps we were too panicked about our own jobs and industries to fret about the future of jobs and industry; or perhaps we were also really afraid of robots or were too busy looking at our new phones; or perhaps, however easy we found the apocalypse reflex in our culture and the path of panic in our politics, we truly had a good-news bias when it came to the big picture; or, really, who knows why—there are so many aspects to the climate kaleidoscope that transforms our intuitions about environmental devastation into an uncanny complacency that it can be hard to pull the whole picture of climate distortion into focus. But we simply wouldn’t, or couldn’t, or anyway didn’t look squarely in the face ﻿of the science. This is not a book about the science of warming; it is about what warming means to the way we live on this planet. But what does that science say? It is complicated research, because it is built on two layers of uncertainty: what humans will do, mostly in terms of emitting greenhouse gases, and how the climate will respond, both through straightforward heating and a variety of more complicated, and sometimes contradictory, feedback loops. But even shaded by those uncertainty bars it is also very clear research, in fact terrifyingly clear. The United Nations’ Intergovernmental Panel on Climate Change (IPCC) offers the gold-standard assessments of the state of the planet and the likely trajectory for climate change—gold-standard, in part, because it is conservative, integrating only new research that passes the threshold of inarguability. A new report is expected in 2022, but the most recent one says that if we take action on emissions soon, instituting immediately all of the commitments made in the Paris accords but nowhere yet actually implemented, we are likely to get about 3.2 degrees of warming, or about three times as much warming as the planet has seen since the beginning of industrialization—bringing the unthinkable collapse of the planet’s ice sheets not just into the realm of the real but into the present.29, 30 That would eventually flood not just Miami and Dhaka but Shanghai and Hong Kong and a hundred other cities around the world.31 The tipping point for that collapse is said to be around two degrees; according to several recent studies, even a rapid cessation of carbon emissions could bring us that amount of warming by the end of the century.32 The assaults of climate change do not end at 2100 just because most modeling, by convention, sunsets at that point. This is why some studying global warming call the hundred years to follow the “century of hell.”33 Climate change is fast, much faster than it seems we have the capacity to recognize and acknowledge; but it is also long, almost longer than we can truly imagine. In reading about warming, you will often come across analogies from the planetary record: the last time the planet was this much warmer, the logic runs, sea levels were here. These conditions are not coincidences. The sea level was there largely because the planet was that much warmer, and the geologic record is the best model we have for understanding the very complicated climate system and gauging just how much damage will come from turning up the temperature by two or four or six degrees. Which is why it is especially concerning that recent research into the deep history of the planet suggests that our current climate models may be underestimating the amount of warming we are due for in 2100 by as much as half.34 In other words, temperatures could rise, ultimately, by as much as double what the IPCC predicts. Hit our Paris emissions targets and we may still get four degrees of warming, meaning a green Sahara and the planet’s tropical forests transformed into fire-dominated savanna.35 The authors of one recent paper suggested the warming could be more dramatic still—slashing our emissions could still bring us to four or five degrees Celsius, a scenario they said would pose severe risks to the habitability of the entire planet. “Hothouse Earth,” they called it.36 Because these numbers are so small, we tend to trivialize the differences between them—one, two, four, five. Human experience and memory offer no good analogy for how we should think of those thresholds, but, as with world wars or recurrences of cancer, you don’t want to see even one. At two degrees, the ice sheets will begin their collapse, 400 million more people will suffer from water scarcity, major cities in the equatorial band of the planet will become unlivable, and even in the northern latitudes heat waves will kill thousands each summer.37, 38 There would be thirty-two times as many extreme heat waves in India, and each would last five times as long, exposing ninety-three times more people.39 This is our best-case scenario. At three degrees, southern Europe would be in permanent drought, and the average drought in Central America would last nineteen months longer and in the Caribbean twenty-one months longer. In northern Africa, the figure is sixty months longer—five years. The areas burned each year by wildfires would double in the Mediterranean and sextuple, or more, in the United States. At four degrees, there would be eight million more cases of dengue fever each year in Latin America alone and close to annual global food crises.41 There could be 9

percent more heat-related deaths.40 Damages from river flooding would grow thirtyfold in Bangladesh, twentyfold in India, and as much as sixtyfold in the United Kingdom. In certain places, six climate-driven natural disasters could strike simultaneously, and, globally, damages could pass $600 trillion—more than twice the wealth as exists in the world today. Conflict and warfare could double. Even if we pull the planet up short of two degrees by 2100, we will be left with an atmosphere that contains 500 parts per million of carbon—perhaps more. The last time that was the case, sixteen million years ago, the planet was not two degrees warmer; it was somewhere between five and eight, giving the planet about 130 feet of sea-level rise, enough to draw a new American coastline as far west as I-95.42 Some of these processes take thousands of years to unfold, but they are also irreversible, and therefore effectively permanent. You might hope to simply reverse climate change; you can’t. It will outrun all of us. This is part of what makes climate change what the theorist Timothy Morton calls a “hyperobject”—a conceptual fact so large and complex that, like the internet, it can never be properly comprehended.43 There are many features of climate change—its size, its scope, its brutality—that, alone, satisfy this definition; together they might elevate it into a higher and more incomprehensible conceptual ﻿category yet. But time is perhaps the most mind-bending feature, the worst outcomes arriving so long from now that we reflexively discount their reality. Yet those outcomes promise to mock us and our own sense of the real in return. The ecological dramas we have unleashed through our land use and by burning fossil fuels—slowly for about a century and very rapidly for only a few decades—will play out over many millennia, in fact over a longer span of time than humans have even been around, performed in part by creatures and in environments we do not yet even know, ushered onto the world stage by the force of warming. And so, in a convenient cognitive bargain, we have chosen to consider climate change only as it will present itself this century. By 2100, the United Nations says, we are due for about 4.5 degrees of warming, following the path we are on today.44 That is, farther from the Paris track than the Paris track is from the two-degree threshold of catastrophe, which it more than doubles. As Naomi Oreskes has noted, there are far too many uncertainties in our models to take their predictions as gospel.45 Just running those models many times, as Gernot Wagner and Martin Weitzman do in their book Climate Shock, yields an 11 percent chance we overshoot six degrees.46 Recent work by the Nobel laureate William Nordhaus suggests that better-than-anticipated economic growth means better than one-in-three odds that our emissions will exceed the U.47N.’s worst-case “business as usual” scenario. In other words, a temperature rise of five degrees or possibly more. The upper end of the probability curve put forward by the U.N. to estimate the end-of-the-century, business-as-usual scenario—the worst-case outcome of a worst-case emissions path—puts us at eight degrees. At that temperature, humans at the equator and in the tropics would not be able to move around outside without dying.48 In that world, eight degrees warmer, direct heat effects would be the least of it: the oceans would eventually swell two hundred feet higher, flooding what are now two-thirds of the world’s major cities; hardly any land on the planet would be capable of efficiently producing any of the food we now eat; forests would be roiled by rolling storms of fire, and coasts would be punished by more and more intense hurricanes; the suffocating hood of tropical disease would reach northward to enclose parts of what we now call the Arctic; probably about a third of the planet would be made unlivable by direct heat; and what are today literally unprecedented and intolerable droughts and heat waves would be the quotidian condition of whatever human life was able to endure.49, 50, 51, 52 We will, almost certainly, avoid eight degrees of warming; in fact, several recent papers have suggested the climate is actually less sensitive to emissions than we’d thought, and that even the upper bound of a business-as-usual path would bring us to about five degrees, with a likely destination around four.53 But five degrees is nearly as unthinkable as eight, and four degrees not much better: the world in a permanent food deficit, the Alps as arid as the Atlas Mountains.54 Between that scenario and the world we live in now lies only the open question of human response. Some amount of further warming is already baked in, thanks to the protracted processes by which the planet adapts to greenhouse gas. But all of those paths projected from the present—to two degrees, to three, to four, five, or even eight—will be carved overwhelmingly by what we choose to do now. There is nothing stopping us from four degrees other than our own will to change course, which we have yet to display. Because the planet is as big as it is, and as ecologically diverse; because humans have proven themselves an adaptable species, and will likely continue to adapt to outmaneuver a lethal threat; and because the devastating effects of warming will soon become too extreme to ignore, or deny, if they haven’t already; because of all that, it is unlikely that climate change will render the planet truly uninhabitable. But if we do nothing about carbon emissions, if the next thirty years of industrial activity trace the same arc upward as the last thirty years have, whole regions will become unlivable by any standard we have today as soon as the end of this century. ﻿A few years ago, E. O. Wilson proposed a term, “Half-Earth,” to help us think through how we might adapt to the pressures of a changing climate, letting nature run its rehabilitative course on half the planet and sequestering humanity in the remaining, habitable half of the world.55 The fraction may be smaller than that, possibly considerably, and not by choice; the subtitle of his book was Our Planet’s Fight for Life. On longer timescales, the even-bleaker outcome is possible, too—the livable planet darkening as it approaches a human dusk. It would take a spectacular coincidence of bad choices and bad luck to make that kind of zero earth possible within our lifetime. But the fact that we have brought that nightmare eventuality into play at all is perhaps the overwhelming cultural and historical fact of the modern era—what historians of the future will likely study about us, and what we’d have hoped the generations before ours would have had the foresight to focus on, too. Whatever we do to stop warming, and however aggressively we act to protect ourselves from its ravages, we will have pulled the devastation of human life on Earth into view—close enough that we can see clearly what it would look like and know, with some degree of precision, how it will punish our children and grandchildren. Close enough, in fact, that we are already beginning to feel its effects ourselves, when we do not turn away. ﻿It is almost hard to believe just how much has happened and how quickly. In the late summer of 2017, three major hurricanes arose in the Atlantic at once, proceeding at first along the same route as though they were battalions of an army on the march.56 Hurricane Harvey, when it struck Houston, delivered such epic rainfall it was described in some areas as a “500,000-year event”—meaning that we should expect that amount of rain to hit that area once every five hundred millennia.57 Sophisticated consumers of environmental news have already learned how meaningless climate change has rendered such terms, which were meant to describe storms that had a 1-in-500,000 chance of striking in any given year. But the figures do help in this way: to remind us just how far global warming has already taken us from any natural-disaster benchmark our grandparents would have recognized. To dwell on the more common 500-year figure just for a moment, it would mean a storm that struck once during the entire history of the Roman Empire. Five hundred years ago, there were no English settlements across the Atlantic, so we are talking about a storm that should hit just once as Europeans arrived and established colonies, as colonists fought a revolution and Americans a civil war and two world wars, as their descendants established an empire of cotton on the backs of slaves, freed them, and then brutalized their descendants, industrialized and postindustrialized, triumphed in the Cold War, ushered in the “end of history,” and witnessed, just a decade later, its dramatic return. One storm in all that time, is what the meteorological record has taught us to expect. Just one. Harvey was the third such flood to hit Houston since 2015.58 And the storm struck, in places, with an intensity that was supposed to be a thousand times rarer still. That same season, an Atlantic hurricane hit Ireland, 45 million were flooded from their homes in South Asia, and unprecedented wildfires tilled much of California into ash.59, 60 And then there was the new category of quotidian nightmare, climate change inventing the once-unimaginable category of obscure natural disasters—crises so large they would once have been inscribed in folklore for centuries today passing across our horizons ignored, overlooked, or forgotten. In 2016, a “thousand-year flood” drowned small-town Ellicott City, Maryland, to take but one example almost at random; it was followed, two years later, in the same small town, by another.61 One week that summer of 2018, dozens of places all over the world were hit with record heat waves, from Denver to Burlington to Ottawa; from Glasgow to Shannon to Belfast; from Tbilisi, in Georgia, and Yerevan, in Armenia, to whole swaths of southern Russia.62 The previous month, the daytime temperature of one city in Oman reached above 121 degrees Fahrenheit, and did not drop below 108 all night, and in Quebec, Canada, fifty-four died from the heat.63 That same week, one hundred major wildfires burned in the American West, including one in California that grew 4,000 acres in one day, and another, in Colorado, that produced a volcano-like 300-foot eruption of flames, swallowing an entire subdivision and inventing a new term, “fire tsunami,” along the way.64, 65, 66 On the other side of the planet, biblical rains flooded Japan, where 1.2 million were evacuated from their homes.67 Later that summer, Typhoon Mangkhut forced the evacuation of 2.45 million from mainland China, the same week that Hurricane Florence struck the Carolinas, turning the port city of Wilmington briefly into an island and flooding large parts of the state with hog manure and coal ash.68, 69, 70 Along the way, the winds of Florence produced dozens of tornadoes across the region.71 The previous month, in India, the state of Kerala was hit with its worst floods in almost a hundred years.72 That October, a hurricane in the Pacific wiped Hawaii’s East Island entirely off the map.73 And in November, which has traditionally marked the beginning of the rainy season in California, the state was hit instead with the deadliest fire in its history—the Camp Fire, which scorched several hundred square miles outside of Chico, killing dozens and leaving many more missing in a place called, proverbially, Paradise.74 The devastation was so complete, you could almost forget the Woolsey Fire, closer to Los Angeles, which burned at the same time and forced the sudden evacuation of 170,000. It is tempting to look at these strings of disasters and think, Climate change is here. And one response to seeing things long predicted actually come to pass is to feel that we have settled into a new era, with everything transformed. In fact, that is how California governor Jerry Brown described the state of things in the midst of the state’s wildfire disaster: “a new normal.”75 The truth is actually much scarier. That is, the end of normal; never normal again. We have already exited the state of environmental conditions that allowed the human animal to evolve in the first place, in an unsure and unplanned bet on just what that animal can endure. The climate system that raised us, and raised everything we now know as human culture and civilization, is now, like a parent, dead. And the climate system we have been observing for the last several years, the one that has battered the planet again and again, is not our bleak future in preview. It would be more precise to say that it is a product of our recent climate past, already passing behind us into a dustbin of environmental nostalgia. There is no longer any such thing as a “natural disaster,” but not only will things get worse; technically speaking, they have already gotten worse. Even if, miraculously, humans immediately ceased emitting carbon, we’d still be due for some additional warming from just the stuff we’ve put into the air already. And of course, with global emissions still increasing, we’re very far from zeroing out on carbon, and therefore very far from stalling climate change. The devastation we are now seeing all around us is a beyond-best-case scenario for the future of warming and all the climate disasters it will bring. ﻿What that means is that we have not, at all, arrived at a new equilibrium. It is more like we’ve taken one step out on the plank off a pirate ship. Perhaps because of the exhausting false debate about whether climate change is “real,” too many of us have developed a misleading impression that its effects are binary. But global warming is not “yes” or “no,” nor is it “today’s weather forever” or “doomsday tomorrow.” It is a function that gets worse over time as long as we continue to produce greenhouse gas. And so the experience of life in a climate transformed by human activity is not just a matter of stepping from one stable ecosystem into another, somewhat worse one, no matter how degraded or destructive the transformed climate is. The effects will grow and build as the planet continues to warm: from 1 degree to 1.5 to almost certainly 2 degrees and beyond. The last few years of climate disasters may look like about as much as the planet can take. In fact, we are only just entering our brave new world, one that collapses below us as soon as we set foot on it. Many of these new disasters arrived accompanied by debate about their cause—about how much of what they have done to us comes from what we have done to the planet. For those hoping to better understand precisely how a monstrous hurricane arises out of a placid ocean, these inquiries are worthwhile, but for all practical purposes the debate yields no real meaning or insight. A particular hurricane may owe 40 percent of its force to anthropogenic global warming, the evolving models might suggest, and a particular drought may be half again as bad as it might have been in the seventeenth century. But climate change is not a discrete clue we can find at the scene of a local crime—one hurricane, one heat wave, one famine, one war. Global warming isn’t a perpetrator; it’s a conspiracy. We all live within climate and within all the changes we have produced in it, which enclose us all and everything we do. If hurricanes of a certain force are now five times as likely as in the pre-Columbian Caribbean, it is parsimonious to the point of triviality to argue over whether this one or that one was “climate-caused.” All hurricanes now unfold in the weather systems we have wrecked on their behalf, which is why there are more of them, and why they are stronger. The same is true for wildfires: this one or that one may be “caused” by a cookout or a downed power line, but each is burning faster, bigger, and longer because of global warming, which gives no reprieve to fire season. Climate change isn’t something happening here or there but everywhere, and all at once. And unless we choose to halt it, it will never stop. Over the past few decades, the term “Anthropocene” has climbed out of academic discourse and into the popular imagination—a name given to the geologic era we live in now, and a way to signal that it is a new era, defined on the wall chart of deep history by human intervention. One problem with the term is that it implies a conquest of nature, even echoing the biblical “dominion.” But however sanguine you might be about the proposition that we have already ravaged the natural world, which we surely have, it is another thing entirely to consider the possibility that we have only provoked it, engineering first in ignorance and then in denial a climate system that will now go to war with us for many centuries, perhaps until it destroys us. That is what Wally Broecker, the avuncular oceanographer, means when he calls the planet an “angry beast.”76 You could also go with “war machine.” Each day we arm it more. The assaults will not be discrete—this is another climate delusion. Instead, they will produce a new kind of cascading violence, waterfalls and avalanches of devastation, the planet pummeled again and again, with increasing intensity and in ways that build on each other and undermine our ability to respond, uprooting much of the landscape we have taken for granted, for centuries, as the stable foundation on which we walk, build homes and highways, shepherd our children through schools and into adulthood under the promise of safety—and subverting the promise that the world we have engineered and built for ourselves, out of nature, will also protect us against it, rather than conspiring with disaster against its makers. Consider those California wildfires. In March 2018, Santa Barbara County issued mandatory evacuation orders for those living in Montecito, Goleta, Santa Barbara, Summerland, and Carpinteria—where the previous December’s fires had hit hardest. It was the fourth evacuation order precipitated by a climate event in the county in just three months, but only the first had been for fire.77 The others were for mudslides ushered into possibility by that fire, one of the toniest communities in the most glamorous state of the world’s preeminently powerful country upended by fear that their toy vineyards and hobby stables, their world-class beaches and lavishly funded public schools, would be inundated by rivers of mud, the community as thoroughly ravaged as the sprawling camps of temporary shacks housing Rohingya refugees from Myanmar in the monsoon region of Bangladesh.78 It was. More than a dozen died, including a toddler swept away by mud and carried miles down the mountainslope to the sea; schools closed and highways flooded, foreclosing the routes of emergency vehicles and making the community an inland island, as if behind a blockade, choked off by a mud noose.79 Some climate cascades will unfold at the global level—cascades so large their effects will seem, by the curious legerdemain of environmental change, imperceptible. A warming planet leads to melting Arctic ice, which means less sunlight reflected back to the sun and more absorbed by a planet warming faster still, which means an ocean less able to absorb atmospheric carbon and so a planet warming faster still. A warming planet will also melt Arctic permafrost, which contains 1.8 trillion tons of carbon, more than twice as much as is currently suspended in the earth’s atmosphere, and some of which, when it thaws and is released, may evaporate as methane, which is thirty-four times as powerful a greenhouse-gas warming blanket as carbon dioxide when judged on the timescale of a century; when﻿ judged on the timescale of two decades, it is eighty-six times as powerful.80, 81 A hotter planet is, on net, bad for plant life, which means what is called “forest dieback”—the decline and retreat of jungle basins as big as countries and woods that sprawl for so many miles they used to contain whole folklores—which means a dramatic stripping-back of the planet’s natural ability to absorb carbon and turn it into oxygen, which means still hotter temperatures, which means more dieback, and so on. Higher temperatures means more forest fires means fewer trees means less carbon absorption, means more carbon in the atmosphere, means a hotter planet still—and so on. A warmer planet means more water vapor in the atmosphere, and, water vapor being a greenhouse gas, this brings higher temperatures still—and so on. Warmer oceans can absorb less heat, which means more stays in the air, and contain less oxygen, which is doom for phytoplankton—which does for the ocean what plants do on land, eating carbon and producing oxygen—which leaves us with more carbon, which heats the planet further. And so on. These are the systems climate scientists call “feedbacks”; there are more.82 Some work in the other direction, moderating climate change. But many more point toward an acceleration of warming, should we trigger them. And just how these complicated, countervailing systems will interact—what effects will be exaggerated and what undermined by feedbacks—is unknown, which pulls a dark cloud of uncertainty over any effort to plan ahead for the climate future. We know what a best-case outcome for climate change looks like, however unrealistic, because it quite closely resembles the world as we live on it today. But we have not yet begun to contemplate those cascades that may bring us to the infernal range of the bell curve. Other cascades are regional, collapsing on human communities and buckling them where they fall. These can be literal cascades—human-triggered avalanches are on the rise, with 50,000 people killed by avalanches globally between 2004 and 2016.83 In Switzerland, climate change has unleashed a whole new kind, thanks to what are called “rain-on-snow” events, which also caused the overflow of the Oroville Dam in Northern California and the 2013 flood of Alberta, Canada, with damages approaching $5 billion.84 But there are other kinds of cascade, too. Climate-driven water shortages or crop failures push climate refugees into nearby regions already struggling with resource scarcity. Sea-level rise inundates cropland with more and more saltwater flooding, transforming agricultural areas into brackish sponges no longer able to adequately feed those living off them; flooding power plants, knocking regions offline just as electricity may be needed most; and crippling chemical and nuclear plants, which, malfunctioning, breathe out their toxic plumes. The rains that followed the Camp Fire flooded the tent cities hastily assembled for the first disaster’s refugees. In the case of the Santa Barbara mudslides, drought produced a state full of dry brush ripe for a spark; then a year of anomalously monsoonish rain produced only more growth, and wildfires tore through the landscape, leaving a mountainside without much plant life to hold in place the millions of tons of loose earth that make up the towering coastal range where the clouds tend to gather and the rain first falls. Some of those watching from afar wondered, incredulously, how a mudslide could kill so many. The answer is, the same way as hurricanes or tornadoes—by weaponizing the environment, whether “man-made” or “natural.” Wind disasters do not kill by wind, however brutal it gets, but by tugging trees out of earth and transforming them into clubs, making power lines into loose whips and electrified nooses, collapsing homes on cowering residents, and turning cars into tumbling boulders. And they kill slowly, too, by cutting off food delivery and medical supplies, making roads impassable even to first responders, knocking out phone lines and cell towers so that the ill and elderly must suffer, and hope to endure, in silence and without aid. Most of the world is not Santa Barbara, with its Mission-style impasto of infinite-seeming wealth, and in the coming decades many of the most punishing climate horrors will indeed hit those least able to respond and recover. This is what is often called the problem of environmental justice; a sharper, less gauzy phrase would be “climate caste system.” The problem is acute within countries, even wealthy ones, where the poorest are those who live in the marshes, the swamps, the floodplains, the inadequately irrigated places with the most vulnerable infrastructure—altogether an unwitting environmental apartheid. Just in Texas, 500,000 poor Latinos live in shantytowns called “colonias” with no drainage systems to deal with increased flooding.85 The cleavage is even sharper globally, where the poorest countries will suffer more in our hot new world. In fact, with one exception—Australia—countries with lower GDPs will warm the most.86 That is notwithstanding the fact that much of the global south has not, to this point, defiled the atmosphere of the planet all that much. This is one of the many historical ironies of climate change that would better be called cruelties, so merciless is the suffering they will inflict. But disproportionately as it will fall on the world’s least, the devastation of global warming cannot be easily quarantined in the developing world, as much as those in the Northern Hemisphere would probably, and not to our credit, prefer it. Climate disaster is too indiscriminate for that. In fact, the belief that climate could be plausibly governed, or managed, by any institution or human instrument presently at hand is another wide-eyed climate delusion. The planet survived many millennia without anything approaching a world government, in fact endured nearly the entire span of human civilization that way, organized into competitive tribes and fiefdoms and kingdoms and nation-states, and only began to build something resembling a cooperative blueprint, very piecemeal, after brutal world wars—in the ﻿form of the League of Nations and United Nations and European Union and even the market fabric of globalization, whatever its flaws still a vision of cross-national participation, imbued with the neoliberal ethos that life on Earth was a positive-sum game. If you had to invent a threat grand enough, and global enough, to plausibly conjure into being a system of true international cooperation, climate change would be it—the threat everywhere, and overwhelming, and total. And yet now, just as the need for that kind of cooperation is paramount, indeed necessary for anything like the world we know to survive, we are only unbuilding those alliances—recoiling into nationalistic corners and retreating from collective responsibility and from each other. That collapse of trust is a cascade, too. ﻿Just how completely the world below our feet will become unknown to us is not yet clear, and how we register its transformation remains an open question. One legacy of the environmentalist creed that long prized the natural world as an otherworldly retreat is that we see its degradation as a sequestered story, unfolding separately from our own modern lives—so separately that the degradation acquires the comfortable contours of parable, like pages from Aesop, aestheticized even when we know the losses as tragedy. Climate change could soon mean that, in the fall, trees may simply turn brown, and so we will look differently at entire schools of painting, which stretched for generations, devoted to best capturing the oranges and reds we can no longer see ourselves out the windows of our cars as we drive along our highways.87 The coffee plants of Latin America will no longer produce fruit; beach homes will be built on higher and higher stilts and still be drowned.88 In many cases, it is better to use the present tense. In just the last forty years, according to the World Wildlife Fund, more than half of the world’s vertebrate animals have died; in just the last twenty-five, one study of German nature preserves found, the flying insect population declined by three-quarters.89, 90 The delicate dance of flowers and their pollinators has been disrupted, as have the migration patterns of cod, which have fled up the Eastern Seaboard toward the Arctic, evading the communities of fishermen that fed on them for centuries; as have the hibernation patterns of black bears, many of which now stay awake all winter.91, 92, 93 Species individuated over millions of years of evolution but forced together by climate change have begun to mate with one another for the first time, producing a whole new class of hybrid species: the pizzly bear, the coy-wolf.94 The zoos are already natural history museums, the children’s books already out of date. Older fables, too, will be remade: the story of Atlantis, having endured and enchanted for several millennia, will compete with the real-time sagas of the Marshall Islands and Miami Beach, each sinking over time into snorkelers’ paradises; the strange fantasy of Santa and his polar workshop will grow eerier still in an Arctic of ice-free summers; and there is a terrible poignancy in contemplating how desertification of the entire Mediterranean Basin will change our reading of the Odyssey, or how it will discolor the shine of Greek islands for dust from the Sahara to permanently blanket their skies, or how it will recast the meaning of the Pyramids for the Nile to be dramatically drained.95, 96, 97 We will think of the border with Mexico differently, presumably, when the Rio Grande is a line traced through a dry riverbed—the Rio Sand, it’s already been called.98 The imperious West has spent five centuries looking down its nose at the plight of those living within the pale of tropical disease, and one wonders how that will change when mosquitoes carrying malaria and dengue are flying through the streets of Copenhagen and Chicago, too. But we have for so long understood stories about nature as allegories that we seem unable to recognize that the meaning of climate change is not sequestered in parable. It encompasses us; in a very real way it governs us—our crop yields, our pandemics, our migration patterns and civil wars, crime waves and domestic assaults, hurricanes and heat waves and rain bombs and megadroughts, the shape of our economic growth and everything that flows downstream from it, which today means nearly everything. Eight hundred million in South Asia alone, the World Bank says, would see their living conditions sharply diminish by 2050 on the current emissions track, and perhaps a climate slowdown will even reveal the bounty of what Andreas Malm calls fossil capitalism to be an illusion, sustained over just a few centuries by the arithmetic of adding the energy value of burned fossil fuels to what had been, before wood and coal and oil, an eternal Malthusian trap.99, 100 In which case, we would have to retire the intuition that history will inevitably extract material progress from the planet, at least in any reliable or global pattern, and come to terms, somehow, with just how pervasively that intuition ruled even our inner lives, often tyrannically. Adaptation to climate change is often viewed in terms of market trade-offs, but in the coming decades the trade will work in the opposite direction, with relative prosperity a benefit of more aggressive action. Every degree of warming, it’s been estimated, costs a temperate country like the United States about one percentage point of GDP, and according to one recent paper, at 1.5 degrees the world would be $20 trillion richer than at 2 degrees.101, 102 Turn the dial up another degree or two, and the costs balloon—the compound interest of environmental catastrophe. 3.7 degrees of warming would produce $551 trillion in damages, research suggests; total worldwide wealth is today about $280 trillion.103, 104 Our current emissions trajectory takes us over 4 degrees by 2100; multiply that by that 1 percent of GDP and you have almost entirely wiped out the very possibility of economic growth, which has not topped 5 percent globally in over forty years.105 A fringe group of alarmed academics call this prospect “steady-state economics,” but it ultimately suggests a more ﻿complete retreat from economics as an orienting beacon, and from growth as the lingua franca through which modern life launders all of its aspirations.106 “Steady-state” also gives a name to the creeping panic that history may be less progressive, as we’ve come to believe really only over the last several centuries, than cyclical, as we were sure it was for the many millennia before. More than that: in the vision steady-state economics projects of a state-of-nature competitive scramble, everything from politics to trade and war seems brutally zero-sum. For centuries we have looked to nature as a mirror onto which to first project, then observe, ourselves. But what is the moral? There is nothing to learn from global warming, because we do not have the time, or the distance, to contemplate its lessons; we are after all not merely telling the story but living it. That is, trying to; the threat is immense. How immense? One 2018 paper sketches the math in horrifying detail. In the journal Nature Climate Change, a team led by Drew Shindell tried to quantify the suffering that would be avoided if warming was kept to 1.5 degrees, rather than 2 degrees—in other words, how much additional suffering would result from just that additional half-degree of warming. Their answer: 150 million more people would die from air pollution alone in a 2-degree warmer world than in a 1.1075-degree warmer one. Later that year, the IPCC raised the stakes further: in the gap between 1.1085 degrees and 2, it said, hundreds of millions of lives were at stake. Numbers that large can be hard to grasp, but 150 million is the equivalent of twenty-five Holocausts. It is three times the size of the death toll of the Great Leap Forward—the largest nonmilitary death toll humanity has ever produced. It is more than twice the greatest death toll of any kind, World War II. The numbers don’t begin to climb only when we hit 1.5 degrees, of course. As should not surprise you, they are already accumulating, at a rate of at least seven million deaths, from air pollution alone, each year—an annual Holocaust, pursued and prosecuted by what brand of nihilism? This is what is meant when climate change is called an “existential crisis”—a drama we are now haphazardly improvising between two hellish poles, in which our best-case outcome is death and suffering at the scale of twenty-five Holocausts, and the worst-case outcome puts us on the brink of extinction.109 Rhetoric often fails us on climate because the only factually appropriate language is of a kind we’ve been trained, by a buoyant culture of sunny-side-up optimism, to dismiss, categorically, as hyperbole. Here, the facts are hysterical, and the dimensions of the drama that will play out between those poles incomprehensibly large—large enough to enclose not just all of present-day humanity but all of our possible futures, as well. Global warming has improbably compressed into two generations the entire story of human civilization. First, the project of remaking the planet so that it is undeniably ours, a project whose exhaust, the poison of emissions, now casually works its way through millennia of ice so quickly you can see the melt with a naked eye, destroying the environmental conditions that have held stable and steadily governed for literally all of human history. That has been the work of a single generation. The second generation faces a very different task: the project of preserving our collective future, forestalling that devastation and engineering an alternate path. There is simply no analogy to draw on, outside of mythology and theology—and perhaps the Cold War prospect of mutually assured destruction. Few feel like gods in the face of warming, but that the totality of climate change should make us feel so passive—that is another of its delusions. In folklore and comic books and church pews and movie theaters, stories about the fate of the earth often perversely counsel passivity in their audiences, and perhaps it should not surprise us that the threat of climate change is no different. By the end of the Cold War, the prospect of nuclear winter had clouded every corner of our pop culture and psychology, a pervasive nightmare that the human experiment might be brought to an end by two jousting sets of proud, rivalrous tacticians, just a few sets of twitchy hands hovering over the planet’s self-destruct buttons. The threat of climate change is more dramatic still, and ultimately more democratic, with responsibility shared by each of us even as we shiver in fear of it; and yet we have processed that threat only in parts, typically not concretely or explicitly, displacing certain anxieties and inventing others, choosing to ignore the bleakest features of our possible future and letting our political fatalism and technological faith blur, as though we’d gone cross-eyed, into a remarkably familiar consumer fantasy: that someone else will fix the problem for us, at no cost. Those more panicked are often hardly less complacent, living instead through climate fatalism as though it were climate optimism. Over the last few years, as the planet’s own environmental rhythms have seemed to grow more fatalistic, skeptics have found themselves arguing not that climate change isn’t happening, since extreme weather has made that undeniable, but that its causes are unclear—suggesting that the changes we are seeing are the result of natural cycles rather than human activities and interventions. It is a very strange argument; if the planet is warming at a terrifying pace and on a horrifying scale, it should transparently concern us more, rather than less, that the warming is beyond our control, possibly even our comprehension. That we know global warming is our doing should be a comfort, not a cause for despair, however incomprehensively large and complicated we find the processes that have brought it into being; that we know we are, ourselves, responsible for all of its punishing effects ﻿should be empowering, and not just perversely. Global warming is, after all, a human invention. And the flip side of our real-time guilt is that we remain in command. No matter how out-of-control the climate system seems—with its roiling typhoons, unprecedented famines and heat waves, refugee crises and climate conflicts—we are all its authors. And still writing.

#### The distribution of environmental consequences should be a factor in risk analysis – indigenous voices are excluded from environmental forums. Lazarus ‘92

Lazarus, Richard J. “Pursuing ‘Environmental Justice’: The Distributional Effects of Environmental Protection.” 87 NW U. L. Rev 787 (1992). MO – recut// CL

Environmental justice offers two important lessons. The first is that environmental policymakers need to take account of the distributional implications of their decisions. Environmental policymakers' two traditional inquiries - "how much pollution is acceptable," and "what kinds of legal rules would best ensure the accomplishment of that level of pollution" - ignore an essential factor: the distribution of environmental benefits and burdens needs to be an explicit and well-considered element of the environmental policy debate. The current approach, in which distributional concerns are a matter for behind-the-scenes negotiation in the forging of political compromises, has led to unacceptable distributional inequities. Only a few groups possess the substantial resources necessary for entry into those closed fora where environmental decisions are made, and the resulting distributions naturally favor these groups' own economic interests and/or value preferences.

## 3

#### Interpretation: the affirmative must defend a topical policy action.

**This is proven by “resolved” in the resolution**

**Parcher 1** — Jeff Parcher, Former Director of Debate at Georgetown University, 2001 ("Re: Jeff P--Is the resolution a question?," Post to the e-Debate List, February 26, Available Online at <http://www.ndtceda.com/archives/200102/> 0790.html, Accessed 09-10-2005)

> Jeff, I don't think debaters' relation to the resolution is nearly as clear as it you make it out to be in your recent posts. 1. The resolution > is not a question. It is a statement that has "resolved" on one side and a normative statement on the other separated by a colon. What > is the meaning of "resolved?" I know Bill Shanahan has made the argument that "resolved" means "reserved," in which case the > resolution doesn't require you to arrive at any certainty about the truth of the normative statement. (1) Pardon me if I turn to a source besides Bill. American Heritage Dictionary: Resolve: 1. To make a firm decision about. 2. To decide or express by formal vote. 3. To separate something into constiutent parts See Syns at \*analyze\* (emphasis in orginal) 4. Find a solution to. See Syns at \*Solve\* (emphasis in original) 5. To dispel: resolve a doubt. - n 1. Frimness of purpose; resolution. 2. A determination or decision. (2) The very nature of the word "resolution" makes it a question. American Heritage: A course of action determined or decided on. A formal statemnt of a deciion, as by a legislature. (3) The resolution is obviously a question. Any other conclusion is utterly inconcievable. Why? Context. The debate community empowers a topic committee to write a topic for ALTERNATE side debating. The committee is not a random group of people coming together to "reserve" themselves about some issue. There is context - they are empowered by a community to do something. In their deliberations, the topic community attempts to craft a resolution which can be ANSWERED in either direction. They focus on issues like ground and fairness because they know the resolution will serve as the basis for debate which will be resolved by determining the policy desireablility of that resolution. That's not only what they do, but it's what we REQUIRE them to do. We don't just send the topic committtee somewhere to adopt their own group resolution. It's not the end point of a resolution adopted by a body - it's the prelimanary wording of a resolution sent to others to be answered or decided upon. (4) Further context: the word resolved is used to emphasis the fact that it's policy debate. Resolved comes from the adoption of resolutions by legislative bodies. A resolution is either adopted or it is not. It's a question before a legislative body. Should this statement be adopted or not. (5) The very terms 'affirmative' and 'negative' support my view. One affirms a resolution. Affirmative and negative are the equivalents of 'yes' or 'no' - which, of course, are answers to a question.

**Truth testing is awful.**

**A) It turns an urgent public policy question into an esoteric question of philosophical labels, which kills real world decision-making skills – i.e. without a plan there is no counterplan or disad ground;**

**B) It turns negating into an endless quest for counterwarrants, which make the debate irresolvable because we don’t know how many counterwarrants justify a neg ballot, and kills clash because the discussion is about assessing the salience of extreme examples rather than engaging with a competing advocacies.**

**C) It kills precision by forcing both sides to defend sweeping generalizations that no responsible scholar would ever defend without qualification. Plans require more rigorous scholarship.**

**Don’t let them say that the resolution has no actor or verb. Their advocacy only needs to entail the resolution to be topical. Proving that a plan baring the private appropriation of outer space by private entities produces the most just world proves the resolution true. They get to choose which actor would best accomplish this objective because a plan with any actor might entail the resolution.**

## Case

**AT: Role of Ballot and solvency**

#### They say the role of the ballot is essentially to unlearn the ideologies that underlie oppressive structures. But if they fail to propose a way to solve those structures, then how do we know we're rejecting the ideology. Cross apply cross ex! THEIR WHOLE SOLVENCY MECHANIOSM IS NOTHING.

#### If their method leaves oppressive structures in place, it is irrelevant at best and at worst undermines the impetus for real reform. That is not unlearning the ideology of the system, it is embracing helplessness. That is *especially* true for racially priv privileged debaters, because saying "oh well, nothing we can do about it but read some books" just accepts that his own privilege is permanent and unshakeable.

1. **Their role of the debate arguments repeat oppression. Asserting that there is ONLY ONE way for liberation is destined to create tactics which repeat the oppression it opposes.**

**Magnet 6** Shoshana, University of Illinois at Urbana-Champaign, *Qualitative Inquiry*, Protesting Privilege, Volume 12 Number 4 August 2006 736-749

Chela Sandoval (2000) has called the “apparatus of love” one way of working together as it is a strategy of resistance that allows us to develop an oppositional consciousness in which we understand love “as a technology for social transformation” (p. 2). Sandoval advocated for a radical Third World feminism—what Ella Shohat (1998) has referred to as “multicultural feminism”—as a strategy or “science of oppositional ideology” (Sandoval, 2000, p. 144). All of these **tactics of resistance necessitate building coalitions to work together** (McIntyre, 2006). To participate in this struggle with integrity and the ability to listen, **we must think about our place within it.** We have to not only move beyond “white ignorance, white denial, white fear, white apathy, white lies, white power” (Brand, 1994, p. 119) but also think through the ways in which we are privileged to do the hard work of casting aside our own internalized “isms.” How can we develop Sandoval’s oppositional consciousness **if we are concerned by only our own subordination? It is too easy**, therefore, **to forget the ways in which we participate in the** self**same structural inequalities that we are fighting**. In that moment, struggle is undone. Resistance work is possible only when we consider our own impulse to “race to innocence” and acknowledge our contested places within these hierarchies. Without this acknowledgment, it is difficult to move from theory to practice. **All of these strategies for resistance break down as they assert that there is only one ideology that is liberating**

### case

#### Catharsis DA---They’re just striking a pose. they ADOPT radical sounding rhetoric w/o an actual plan to change anything which just allows privileged debaters to affect a catharsis rather than having to take concrete action that addresses the material oppression of the people we’re talking about.

#### They’re reading Black nihilism and saying don’t take state action.

#### They are a white person and reading this does NOT DO ANYTHING.

#### By reading Black nihilism they are saying that approrpaition is nihilist and I refuse to take action to stop that. That’s the opposite of what a white person should do if colonialism is whiteness.

#### Nothing about appropriation or outer space in any of their cards. Only once in their tag and an appropriation definition card.

#### Space col is different. The reason why claiming land on Earth is bad is because there were indigenous people already living there, but space is empty and Mars to our knowledge doesn’t have life.

#### Space col is the only feasible version of decolonization because it is the only way to leave the land without invading a different country.

#### NUQ -the res is only about private entities which means the aff cant solve for public entities

#### Fatalism DA. Their arguments are reductionist. Ontology and transhistorical racism don’t pre-determine institutional victories. Segregation, Jim Crow and slavery are all historically specific moments. Yes, racism is prominent today but paying attention to the way it’s changed and previous political successes are critical to preventing fatalism.

**Reed 18** Adolph Reed -- professor of political science at the University of Pennsylvania. *The Baffler*, The Trouble With Uplift. How black politics succumbed to the siren song of the racial voice, No. 41

The politics thus advanced is **profoundly race-reductionist**, discounting the value of both political agency and the broad pursuit of political alliances within a polity **held to be intractably and irredeemably devoted to white supremacy**. **This fatalistic outlook** works seamlessly to reinforce the status of racial voices who emphasize the interests and concerns of a **singular** racial collectivity. Central to these pundits’ message is the assertion that blacks have it worse, **in every socio-cultural context** that might be adduced. This refrain is also consistent in two important ways with the reigning ideology of neoliberal equality. First, the insistence that disparities of racial access to power are the most meaningful forms of inequality strongly reinforces the neoliberal view that inequalities generated by capitalist market forces are **natural and lie beyond the scope of intervention.** And second, **if American racism is an intractable, transhistorical force**—indeed, **an ontological one**, as Ta-Nehisi Coates has characterized it—**then it lies beyond structural political intervention**. In other words, Coates and other race-firsters diminish the significance of the **legislative and other institutional victories** won since Emancipation, leaving us with only **exhortations to individual conversion** and repentance as a program. This is why, for example, Coates and other proponents of reparations seem **unconcerned** with the **strategic** problem of piecing together the kind of **interracial popular support necessary to actually prevail** on the issue. Such problems do not exist for them because the role of the representative black leader or **voice is precisely to function as an alternative to political action**. Instead, the order of the day is typically to perform racial authenticity in a way that doubles as an appeal for moral recognition from those with the power to bestow it. **Winning anything politically—policies or changes in power relations—is not the point.** That is why the jeremiads offered by contemporary racial voices so commonly boil down to calls for “conversations about race” or equally vapid abstractions like “**racial reckoning” or “coming to terms with” a history defined by racism.** The black leadership role was always at best an accommodation to disfranchisement, going back to its first modern incarnation with Booker T. Washington and his cohort of racial advocates. It is a politics of elite transaction. That is not in itself necessarily a bad thing—President Franklin D. Roosevelt’s “black cabinet,” or Federal Council of Negro Affairs, advised him on matters related to black Americans. But unlike today’s freelance racial voices, they were administration functionaries, and most had standing in racial advocacy, education, labor, and government institutions prior to joining the “cabinet.” The backdoor dealings between King and Johnson during the Selma campaign that DuVernay found too messy to include in her portrait of King’s heroic persona were also part of mundane political maneuvering, the inside-outside game of institutional politics. King and the SCLC, like FDR’s black cabinet, had constituencies that underwrote their standing as representatives of racial interest—which in turn **gave them leverage to make political demands and pursue policy agendas.** A. Philip Randolph used the March on Washington Movement to pressure President Roosevelt in 1941 to issue “Executive Order 8802,” prohibiting racial discrimination in the national defense industry. Randolph, Bayard Rustin, the Negro American Labor Council, and others organized the 1963 March on Washington as part of an **inside-outside strategy** to build support for a jobs program and passage of the 1964 Civil Rights Act. All this painstaking political effort could not be farther from the careerist pursuits of contemporary racial voices, whose standing depends entirely on the favor of powerful opinion-shaping elites in corporate media and elsewhere. Thus, for example, Touré Neblett and others in MSNBC’s stable were unceremoniously expunged from the lineup of talking heads when the network reconfigured its marketing priorities. More dramatically, Melissa Harris-Perry, apparently believing that her viewing audience gave her leverage, openly rebuffed the network’s demand to reorient her program to fit in with its election coverage. In short order, she and her program vanished without a trace from its schedule. Such incidents, and scores of others like them, make it indelibly clear where the lines of authority run when it comes to winning elite-media recognition as a black voice. For Their Own Good The race voices I’ve discussed express a particular class perspective among black Americans, one that harmonizes with left-neoliberal notions of justice and equality. That harmony may help explain why those racial voices—like the black political class in general—are so intent on disparaging the social-democratic politics associated with Bernie Sanders, even though a 2017 Harvard-Harris survey found that Sanders was far more popular with African Americans than with any other demographic category except declared Democrats. He boasted a 73 percent favorable rating among black voters—higher than his approval numbers among Hispanics, Asian-Americans, and considerably higher than those for whites or even 18-34 year-olds. This disjunction between popular opinion and the priorities of the black chattering class underscores the extent to which the racial programs and priorities advanced by those recognized black voices remain much as they were in the Age of Washington. Now as then, we have a leadership stratum dedicated to the class-skewed pursuit of “managerial authority over the nation’s Negro problem.” And the net effect of this top-down model of black discourse is to tether a politics of racial representation to the ruling-class agendas that generate and intensify inequality and insecurity for working people across American society, including among the ranks of black Americans. Black Clintonites, like Congressmen John Lewis (D-GA), James Clyburn (D-SC) and Cedric Richmond (D-LA), all clearly displayed this commitment during the 2016 Democratic primaries when they attacked Sanders as “irresponsible” in calling for non-commodified public goods in education, health care, and other areas. Richmond’s rebuke was especially telling in that he couched it in terms of his role as chair of the Congressional Black Caucus and the group’s “responsibility to make sure to know that young people know that” a social-democratic agenda is “too good to be true.” Richmond’s invocation of civic instruction for the young may be revealing in another way. Lurking beneath that piety is the deeply sedimented common sense of underclass ideology, which posits a population mired in pathologies and hemmed in by an overwhelming racism, and the corollary of interventions aiming to enhance capabilities for individual mobility. (It is, indeed, this same tacit rhetoric of permanent crisis that fuels the notion that black young people must be raised on a diet of inspirational movies.) This vision of unyielding black pathology is yet another testament to the harmony of antiracist and neoliberal ideologies—and it, too, harks directly back to the origins of the black leadership caste at the dawn of the last century. Washington and Du Bois, together with Garvey and other prominent racial nationalists, envisioned their core constituency as a politically mute black population in need of tutelage from their ruling-class-backed leaders. Touré F. Reed persuasively argues that the mildly updated version of this vision now serves as an essential cornerstone of the new black professional-managerial class politics. Underclass mythology grounds professional-class claims to race leadership, while providing the **normative foundation of uplift programs directed toward enhancing self-esteem** rather than the material redistribution of wealth and income. Exhortations to celebrate and demand accolades, career opportunities, and material accumulation for black celebrities and rich people—e.g., box office receipts for black filmmakers or contracts and prestigious appointments for other well-positioned black people—as a racial politics are consistent with the sporadic eruptions of “Buy Black” campaigns since the 1920s and 1930s. Such efforts stood out in stark contrast to more working-class based “Don’t Buy Where You Can’t Work” campaigns that demanded employment opportunities in establishments serving black neighborhoods. Like “Buy Black” campaigns, which seem to have risen again from the tomb of petit-bourgeois wishful thinking, projections of successes for the rich and famous as generic racial victories depend on a sleight-of-hand that treats benefits for any black person as benefits for all black people. This brings to mind comedian Chris Rock’s quip that he went to his mailbox every day for two weeks after the not guilty verdict in the O.J. Simpson murder trial looking for his “O. J. prize,” only to be disappointed. At times, this tendency to absorb the plural into the singular can be strikingly crude and transparently self-interested. The torrent of hostility directed at Rachel Dolezal for having represented herself as black rested on groundless—sometimes entirely made up—claims that she had appropriated jobs, awards, and other honorifics intended for blacks. In addition to the annual contretemps over whether blacks win enough of the most prestigious Oscars, recent racial controversies in the art world illustrate how easily the narrowest guild concerns can masquerade as burning matters of racial justice. The Brooklyn Museum’s hiring of a white person as consulting curator of African art sparked objections that the hire perpetuated “pervasive structures of white supremacy in the art field.” The 2017 furor over the Whitney Biennial’s display of Dana Schutz’s “Open Casket”—inspired by the infamous 1955 photograph of Emmett Till’s brutalized body—reduced to a question of ownership of “black suffering,” or more accurately, of the right to represent and materially benefit from the representation of black suffering. The protesters’ objection, as Walter Benn Michaels put it succinctly, was that “black pain belongs to black artists.” It’s worth noting that one of the leading critics of the painting and its display was Hannah Black, who contended that “non-black people must accept that they will never embody and cannot understand” the gesture Till’s mother, Mamie, made in insisting on an open-casket funeral. Black, who not only called for the painting to be removed from display, but also offered an “urgent recommendation” that it be destroyed, is a Briton who lives in Berlin. From a different standard of cultural proprietorship, one might argue that Schutz, as an American, has a stronger claim than Black to interpret the Till story. After all, the segregationist Southern order and the struggle against that order, which gave Till’s fate its broader social and political significance, **were historically specific moments** of a distinctively American experience. In fact, most claims of cultural ownership and charges of appropriation are bogus. While sometimes they provide an instrumental basis for tortious claims, as in pursuit of restitution for Nazi and other imperialists’ looting of artifacts, more often they posit a dead-end conflation of **fixed and impermeable racial identity** with cultural expression. As Michaels has argued for more than twenty-five years, the discourse of cultural ownership stems from the pluralist mindset that treats “culture” as a key marker of social groups and thereby inscribes it as racial essentialism.¶ In order to legitimate what Michaels describes as “racial rent-seeking,” a curiously inflexible brand of race-first neoliberalism has taken root in American political discourse, proposing a trickle-down model of racial progress, anchored in the mysticism of organic black community. Against this exoticized backdrop, neoliberal race leaders stage the beguiling fantasy that individual “entrepreneurialism” is the key path to rising above one’s circumstances—i.e., the standard American social myth that obscures the deeper need to combat systemic inequalities. The most tragic, and pathetic, expressions of this faith are the versions of the “gospel of prosperity,” which fuse pop **self-realization psychology** and a barely recognizable Christianity to exploit desperation and the desire for life with dignity and respect among their black-majority congregations. The false hopes of the prosperity gospel encourage already vulnerable people to fall prey to all sorts of destructive get-rich-quick schemes; they are the “sigh of the oppressed creature, the heart of a heartless world, and the soul of soulless conditions” channeled through a market-idolatrous Protestant psychobabble. Black ministers and other proponents of entrepreneurialist ideology as racial uplift also played a largely unrecognized role in pushing subprime mortgages, and even payday loans, in black communities. The racial trickle-down success myth is partly a vestige of an earlier era, during which individual black attainments could be seen as testaments to the race’s capacities—and a refutation of the white-sanctioned view of black people as generally inferior. Even then, however, this model of black uplift was enmeshed in the race theory of the time—notably the belief that a race’s capacities were indicated by the accomplishments of its “best” individuals—and it was always inflected with the class perspectives of those who saw themselves as such individuals. The class legacies of this foundational moment in modern black politics may well contribute to the firm insistence among today’s “black voices” **that slavery and Jim Crow mark the transcendent truth of black Americans’ experience** in the United States—and that **an irreducible racism is the source of all manifest racial inequality**. That diagnosis certainly masks class asymmetries among black Americans’ circumstances as well as in the remedies proposed to improve them. Nevertheless, we continue to indulge the politically wrong-headed, **counterproductive**, and even reactionary features of the “**representative black voice” industry** in whatever remains of our contemporary public sphere. And we never reckon with the truly disturbing presumption that any black person who can gain access to the public microphone and performs familiar rituals of “blackness” should be recognized as expressing significant racial truths and deserves our attention. This presumption rests on the unexamined premise that blacks share a common, singular mind that is at once **radically unknowable to non-blacks** and readily downloaded by any random individual setting up shop as a racial voice. And despite what all of our age’s many heroic narratives of individualist race-first triumph may suggest to the casual viewer, **that premise is the essence of racism**.

Turn — they use anti-indigenous logic. To suggest that there is no difference   
between empty space and land occupied by Indigenous people is a) a   
replication of the “terra nullius” logic that justifies US and European   
expansion and b) a complete erasure of Indigenous people. The reason   
colonialism is bad is that it entails stealing land and resources from other   
human beings, not microorganisms on the moon, and to equate the two is   
anti-Indigenous at best and actively imperialist at worst

### Politics Good

#### Scholarly discourse and engagement with politics is key to effective structural reform - critique is insufficient.

**Purdy ’20 -** Jedediah S. Britton-Purdy et al, 20 - ("Building a Law-and-Political-Economy Framework: Beyond the Twentieth-Century Synthesis by Jedediah S. Britton-Purdy, David Singh Grewal, Amy Kapczynski, K. Sabeel Rahman :: SSRN," 3-2-2020, <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3547312)//ey/>

To embrace the possibility of democratic renewal requires rejecting the terms of the Twentieth-Century Synthesis. We believe that the legal realists—and thinkers in a much longer history of political thought—were right in believing that "the economy" is neither self-defining nor self-justifying. The emphasis in these traditions has been the right one: on power, distribution, and the need for legitimacy as the central themes in the organization of economic life. Moreover, precisely because economic ordering is a political and legal artifact, the idea of an "autonomous" economic domain has always been obscurantist and ideological, even when accepted in good faith.' Law does not and never could simply defer to such a realm. Rather, **law is perennially involved in creating and enforcing the terms of economic ordering,** most particularly through the creation and maintenance of markets. One of its most important roles, indeed, is determining who is subject to market ordering and on what terms, and who is exempted in favor of other kinds of protection or provision.' Thus the program of law, politics, and institution building often called "neoliberalism" is, and can only be, a specific theory of how to use state power, to what ends, and for whose benefit.'The **ideological work** of the Twentieth-Century Synthesis has been **to** naturalize and **embed in legal institutions from the Supreme Court to the** Antitrust Office and **W**orld **T**rade **O**rganization a specific disposition of power**.** This power represents a deployment of market ordering that produces intense and cross-cutting forms of inequality and democratic erosion. However, Twentieth-Century Synthesis theorists tend not to see this, precisely because the Synthesis makes it so hard to see (or at least so easy to overlook). If it is to succeed, **law and political economy** will also **require something beyond mere critique. It will require a positive agenda.** Many **new** and energized **voices**, from the legal academy to political candidates to movement activists, are already building in this direction,' **calling for** and giving shape to **programs for more genuine democracy that also takes seriously questions of economic** power **and racial subordination;**171 more equal distribution of resources and life chances;172 more public and shared resources and infrastructues;173 the displacement of concentrated corporate power and rooting of new forms of worker power;174 the end of mass incarceration **and broader contestation of** the long history of the criminalization and **control of poor people and people of color in building capitalism;**175 the recognition of finance and money as public infrastructures;176 the challenges posed by emerging forms of power and control arising from new technologies;177 and the need for a radical new emphasis on ecology.178 These are the materials from which a positive agenda, over time, will be built. **Political fights interact generatively with scholarly and policy debates in pointing** the way **toward a more democratic political economy.** The emergence of new grassroots movements, campaigns, and proposals seeking to deepen our democracy is no guarantee of success. But their prevalence and influence make clear the dangers and opportunities of this moment of upheaval—and highlight the stakes of building a new legal imaginary. 179 Neoliberal political economy, with its underlying commitments to efficiency, neutrality, and anti-politics, helped animate, shape, and legitimate a twentieth-century consensus that erased power, encased the market, and reinscribed racialized, economic, and gendered inequities. By contrast, **a legal imaginary of democratic political economy**, that takes seriously underlying concepts of power, equality, and democracy, **can inform a wave of** legal **thought whose critique and policy imagination can amplify and accelerate these movements for structural reform** and, if we are lucky, help remake our polity in more deeply democratic ways.

# Nr

#### First util[3] Extinction has already happened; terror and horror of extinction is the same as people who have committed genocide and how various form of people have already disappeared off of the world. It's only self-centered west that says human extinction is worse: over 200 indigenous languages have been extinct, 2 die every month

This is morally repugnant – extinction has not happened – im siure all the black indigenous ppl on earth would agree w me

#### [4] Pandoras box: They concede Walker, Whiteness wants to extend its violence to the entire Universe, every star would become a Vietnam every planet a new frontier

Not a reason to vote against util

#### [5] They conceded Salih and Corry 21, Collective vulnerability is a façade that has historically ignored all communal vulnerability, we can’t justify atrocities like colonialism that we are 100% of happening for the sake of a 0.01% of extinction

Climate chabge affects everyone uve conceded Lazarus which says it especially effects indigenous people

#### [6] Screw moral uncertainty, perfect morality doesn’t exist, we already know colonialism sucks yet it still exists, we won’t just find some unifying moral truth.

This is a horrible position to take as an educator – we want to do whats best for the greatest number of people including people of colour

EXTEND SSP – U HAVE UNMITIGATED OFFENSE on how WE SOVLE WARMING

IT IS AN EASY NEGATIVE BALLOT BC THEY CONCEDED THAT SSP SOLVES FOR WARMING, THAT ITS FEASIBLE, AND THAT ITS COMING NOW AND IS KEY TO SOLVE CLIMATE CHANGE.

THEY SAID PERM DO CP UCANT DO THAT BC SSP IS PRIVATE APPROPRIATION SO THAT’S SEVERANCE

AND THEY CANT PERM DO THE AFF AND THEN THE NEG BC THAT’S ALSO SEVERANCE

UR WILLIGN TO SACRIFICE THE LIFE OF PEOPLE OF COLOUR AND INDIGENOUS PEOPLE IN ORDER TO STAND ON THIS PRINCIPLE

IF I PROVE MINE IS THE BETTER POLICY, THAT DISPROVES THE THESIS OF AFF

CASE

VOTE THEM DOWN – THEY DISMISS ALL PRIVATE PROPERTY AS BAD

“Politics pathologizes the general antagonism in order to prescribe more and more politics. We refuse this prescription and embrace a metaphysics of incompleteness,”

THEIR REFUSAL

they solve by “deconstructing”

THEY WANT YOU TO VOTE FOR THEM BY POINTING OUT THAT RACISM IS BAD. THAT IS A HORRBIBLE, HORRIBLE, HORRIBLE, HORRIBLE, HORRIBLE METHOD.

CATHARSIS DA!!