### 2NR

#### Their evidence says the majority of one sided violence happens in authoritarian regimes, not in free market societies—proves capitalism is good.

1AC Lawrence 19 (Michael Lawrence – PhD Candidate at the University of Waterloo-Ontario. “Violence, Conflict, and World Order: Rethinking War with a Complex Systems Approach” *Phd,* <https://uwspace.uwaterloo.ca/bitstream/handle/10012/15545/Lawrence_Michael.pdf?sequence=1&isAllowed=y>, DOA: 1/24/21, kbb)

Any celebration of the global reduction of violence over human history, however, may be cut short in three ways. First, it is possible that the data has been misread. Bradley Thayer (2013: 405-411), for example, suggests that the decline is largely a Western trend,55 and an epiphenomenon of a particularly fortuitous but ephemeral moment of history – American hegemony. Such doubts notwithstanding, there is indeed a broad scholarly consensus that war has declined (Mueller, 2009).56 The decline trend may be reliable, but (second), as Goldstein and Pinker readily acknowledge, it could reverse. The decline in civil wars, for example, remains recent and tentative, having peaked less than three decades ago. And from climate change to artificial intelligence, hegemonic power transitions to resource scarcity, and financial crisis to automation (amongst othner concerns), the immediate future portends no shortage of issues that could potentially trigger a resurgence of war. The third cause for caution is that the decline of war could mask the transformation of violent conflicts into alternate forms that are overlooked by perspectives focused on war.57 Such a transformation could occur amidst a general decline of violence, or represent a countervailing trend that expands violence in coming years. This section explores this third possibility by critiquing the very concept of war and discussing other contemporary forms of organized violence that elude the category yet rival its lethality. As with civil war, there is no commonly accepted or authoritative definition of the more general category of ‘war’. As a starting point, Levy and Thompson (2010: 5), in their treatise on the subject, provide a broad definition of war “as sustained, coordinated violence between political organizations”.58 More specifically, their definition encompasses the use of violence in a sustained and high-magnitude manner between two or more political organizations in strategic pursuit of their interests (ibid: 5-11). But even this very general definition has a particular historical and cultural lineage stemming from Modern Europe and the Cold War (Holsti, 1991: 13). “What we tend to perceive as war, what policy makers and military leaders define as war, is, in fact, a specific phenomenon which took shape in Europe somewhere between the fifteenth and eighteenth centuries, although it has gone through several different phases since then” (Kaldor, 2012: 15). The lack of consensus notwithstanding, the term ‘war’ in common and academic parlance of the post-World War II Western world tends to involve at least some (if not all) of the following characteristics: • War is a continuation of politics by other means (Clausewitz, 2008: 28), exercised by a political authority in order to achieve its interests, however defined. It is “an act of force to compel our enemy to do our will” (ibid: 13, italics removed). As a political instrument, war “is one of many ways of wielding influence, of compressing change into a relatively short period of time, of resolving issues that were not amenable to other techniques of settlement” (Holsti, 1991: 17). • War is fought between two or more political organizations in a mutual exchange of violence; it thus excludes one-sided attacks on people who are not fighting back (Levy and Thompson, 2010: 6). War can therefore be distinguished from genocide, ethnic cleansing, politicide, democide, and other forms of massacre perpetrated against non-combatants. • War is conducted by specialists in violence who are trained in the use of force and organized into some sort of hierarchy of command and control. In Clausewitz’s ‘trinitarian’ understanding, war is conducted by professional militaries, as directed by governments, and separable from (yet dependent upon) societies. By implication, war is fought between soldiers, and should not target civilians. • War has a discernable beginning and end, and thus represents a temporary rupture of ‘normalcy’ (or ‘normal politics’), which is ultimately restored through decisive battles and peace settlements. Peace and war are mutually exclusive conditions. • War allows for a legitimate/legal type of killing amongst combatants that is distinct from the criminal offence of murder (Walzer, 2006: 38-39). Once an armed conflict is underway, international humanitarian law supersedes human rights law and national sources of law, granting states and their agents “expanded rights to kill without warning, detain without trial, and suspend or derogate from treaties and other obligations” (ILA, 2012: 324). • War has moral and legal limits on the ways in which it may be conducted. In a wide variety of historical and cultural settings, people have integrated various “notions about who can fight, what tactics are acceptable, when battle has to be broken off, and what prerogatives go with victory into the idea of war itself” (Walzer, 2006: 24- 25). Although such standards are frequently violated, their existence as common understandings of what war is can be seen in the justifications and objections to apparent transgressions, and the lies that politicians tell about them (ibid: 19-20, 44-46). The relevance of each of these characteristics to the definition of war is highly debatable, especially across different times and places, but that is indeed the point. Kalevi J. Holsti aptly captures the issue in statements made almost three decades apart from each other: In the second half of the twentieth century, the forms of armed combat have diversified to the point where we can no longer speak of war as a single institution of the states system… If war was once an institution in the sense that it had established norms, rules, etiquettes, and standardized strategies and tactics, that is no longer the case today. The uses of force for political purposes range from intifadas, terrorism, and guerrilla wars, through peacekeeping interventions, to conventional set warfare between organized armies. (Holsti, 1991: 272). The institutional character of war has changed no less significantly. The European interstate wars of the seventeenth through twentieth centuries were characterized by the Clausewitzian distinctions between combatants and civilians and between clearly identified armed forces fighting for known political objectives achieved through violent means to force and enemy to surrender. The dividing line between war and peace was clearly demarcated. Peace ended with declarations of war, and war ended with formal peace conferences. These clear distinctions have largely disappeared. Most contemporary ‘wars’ are between factions within states and limited foreign interventions, characterized by the deliberate targeting of civilians, hazy or unknown political objectives, fragility of armistices and peace treaties, and the reappearance of mercenaries. (Holsti, 2018: 189). Amidst such uncertainty, debate, and change, many have used the term ‘war’ capriciously, from the ‘war on poverty’ to the ‘war on drugs’ and the ‘war on terror’.59 There should perhaps be a ‘war on declarations of war on things that are not matters of war’. Phrases such as these are no doubt misleading, but there are additional reasons to question the terminology of war, and particularly any presumption that war is the most lethal form of killing that humanity inflicts upon itself. The remainder of this section presents three such considerations, arguing that the notion of war has connotations and denotations that omit from its purview some of the most troubling violent conflicts in recent years. 1. Many of the violent deaths associated with wars are not the product of war fighting Much of the deadly violence that occurs during war is not a result of war fighting. It does not stem from the confrontation between the organized armed forces (combatants) of rival belligerent groups in battle, but rather from “one-sided violence” in which an armed combatant group assaults an unarmed civilian population in campaigns usually termed genocide, ethnic cleansing, politicide, or, most broadly ‘democide’ – any attempt to exterminate a segment or segments of the civilian population. Emphasizing this distinction, R. J. Rummel (1994: 3, 9) found that in the first 88 years of the 20th century, governments killed approximately 170 million non-combatants outside of battle settings, a number 4.4 times as large as the 38.5 million battle deaths of the period.60 {{{{{ Indeed, Rummel (1997: 3-4) lists fifteen ‘megamurderer’ regimes, defined as “those states killing in cold blood, aside from warfare, 1 million or more men, women, and children.” All such regimes were authoritarian or totalitarian, though democracies have perpetrated democides as well, on smaller scales (ibid: 14-16).}}}}}“Most democides occur under the cover of war, revolution, or guerrilla war, or in their aftermath” (ibid: 22), but their victims are either not counted,61 {{{{{ In the CoW methodology, for example, “the requirement of sustained combat (or mutual military action) is instrumental in contrasting war with one-sided violence, such as massacres. Thus incidents in which there were large-scale massacres of disarmed combatants (or prisoners) outside of combat operations would not be considered wars” and are thus excluded from the war data (Sarkees, n. d.: 13)}}}}} or hidden amongst the ‘battle deaths’. In this way, quantitative accounts such as those summarized above can misrepresent the true number of war deaths or the actual (non-war) nature of the killing. Common estimates that World War II killed 40 to 60 million people, for example, include (but do not distinguish) the up to 47 million killed by democide during the global conflagration (ibid: 24-25). Counterinsurgencies are particularly prone to acts of democide amidst their combat (Valentino et al., 2004). In theory, counterinsurgency attempts to win ‘hearts and minds’ by targeting violence solely against insurgents while providing civilians with security and other public goods. Insurgencies, however, often flourish because governments are not willing to mount the reforms sought by large segments of the population. Within such limitations, ‘hearts and minds’ strategies are insufficient and unsuccessful, and the counterinsurgency devolves into indiscriminate violence against civilians to punish or deter their perceived support for insurgents (Branch and Wood, 2010). During the Guatemalan civil war, for example, the army implemented a ‘30/70 bullets and beans’ counterinsurgency strategy that massacred the 50 to 75 thousand largely indigenous people deemed lost to guerrilla subversion in acts that the United Nations found to constitute genocide against the Mayan peoples (Schirmer, 1999: 94; REMHI, 1999; Rothenberg, 2012: 61-80). The remaining seventy percent of the population in conflict areas were subject to relocation and military control of all aspects of daily life in order to prevent contact with the rebels (Schirmer, 1998: 23-4). While fear of rebel support among civilians drove the genocide in Guatemala, Stathis Kalyvas (2006: chs. 7, 10) argues that significant portions of the violence of the Greek civil war (1944-49) stemmed not from the political conflict, but from denunciations made to settle interpersonal feuds and seize opportunities for material gain created by the war. The most devastating violence of both wars did not arise from war fighting, but from deliberate assaults against civilians. 2. Many non-war forms of violence rival contemporary wars in their lethality The world hosts many instances of organized violence that rival contemporary wars in their lethality, but may be overlooked or underemphasized in large-scale analyses because they do not fit common conceptions of war, and thus lack the priority that attends the label. As Keith Krause (2013: 44) points out, a “narrow focus on battle deaths (of recognized combatants or civilian collateral casualties of battle) and a particular definition of organized group (with political aims) excludes from purview almost entirely such things as the [2008] postelection violence in Kenya (which claimed more than 1,000 liv es) or the violence in Mexico that involved the direct use of the armed forces and has claimed more than 40,000 lives since 2006!” The number of deaths related to organized crime in Mexico in the 2007-2016 period is now estimated to be as high as 91 547 by Milenio and 72 841 by Reforma (Mexican periodicals that have tracked the fatalities). Ironically, the violence exploded in part because the Mexican government mistreated its campaign against organized crime as a war, particularly after 2006 when Mexican President Felipe Calderón deployed 50 000 soldiers and 30 000 Federal Police officers (Wilkinson and Ellingwood, 2010) in a direct “frontal attack against narcotraffcking, in all territories, with all the force in [government] reach, all the time” (Aguilar and Castañeda, 2009: 11-12, translated by author). Despite these considerable absolute numbers of homicide in Mexico, the country’s rate of violent death in the 2007-2016 period remained low relative to dozens of other countries, in the range of 10-20 killed per 100 000 population. This rate is nowhere near that of war-torn Syria, which the Small Arms Survey found to have the highest rate of violent death in 2016 at 158.8 per 100 000 population (the rate peaked in 2013 at 267.8; in the decade before the 2011 Arab Spring it was between just 2 and 3). Of the 14 countries with a rate of violent death above 40 per 100 000 population in 2016, however, only six (marked in red in Figure 7) were experiencing or emerging from war.62 {{{{{ Similarly, Geneva Declaration’s (2015) Global Burden of Armed Violence report found that in 2012, “37 countries exhibited lethal violence rates higher than 10 per 100,000. Only 13 of these countries were experiencing a conflict or had recently emerged from one” (ibid: 51-52). And the Small Arms Survey found that of “the 20 countries with the highest rates [of violent death in 2015], only nine were affected by armed conflict in the observed period, highlighting that violence related deaths are not solely an issue in countries affected by open conflict. It should be noted that in absolute numbers, more lives were lost to violence in 2015 in large countries such as Brazil (56,500), India (36,000), and Nigeria (28,000) than in Syria. In fact, Brazil’s death toll for 2015 exceeds those of Iraq and Syria combined” (Small Arms Survey [SAS], 2016: 5).}}}}} Today, much of the world’s most deadly violence is not war violence, as revealed in Figure 8. War deaths remain less than a quarter of violent deaths worldwide, but their absolute numbers have risen over the past decade, from an annual average of 55 000 in the 2004-2009 period, to 70 000 in 2007-2012, and to 90 000 in 2010-2015. The growth stems largely from wars in Afghanistan, Iraq, and Syria (SAS, 2016). The vast majority of violent deaths, however, occur outside of war zones. Overall, the “global rate of violent deaths is on the rise… While the number of countries registering medium to high levels of violence has decreased, the average violent death rate in the highest category has increased, pointing to a growing proportion of violent deaths in a decreasing number of countries” (SAS, 2016: 7). Nationally aggregated statistics, however, do not capture the uneven spatial distribution of violence. For the first time in history, about half of humanity now lives in cities, so that issues of human security are deeply intertwined with urban insecurity (Humansecurity-cities.org, 2007). As a consequence, many cities experience extremely high homicide rates stemming from crime (organized and common) as well as (non-war) political violence. 3. Many contemporary armed conflicts are so multifaceted that they defy the longstanding binaries that define ‘war’ Numerous instances of contemporary organized violence run obliquely to the basic distinctions and dichotomies of established classifications.63 The recent prominence of the concept of ‘hybridity’ within the peace, conflict, and security literatures highlights this condition (Lawrence, 2017). Krause (2013: 44-45) thus stresses the “categorical hybridity” between war and peace, war and crime, and war versus non-war violence. The archetypal characteristics of war outlined above scarcely adhere to many cases of violent conflict. Motivations, institutions, and temporalities are multifaceted and fluid. In what Krause terms ‘motivational hybridity,’ organized violence involves a wide range of motivations – political, economic, interpersonal, and ideological, amongst others. Perpetrators often act with multiple simultaneous aims, creating diverse dynamics of violent conflict (Geneva Declaration, 2011: 15, 18). The variety of motivations often reflects the ‘institutional hybridity’ of violent actors, who do not fit into the basic state versus nonstate dichotomy (Krause, 2013: 45-48). Prime examples include state officials who act in illegal (or extra-legal) ways, militias with informal ties to government and political parties, local self-defence groups, private security companies, and organized criminal groups who manage to corrupt and capture segments of government. Motivational and institutional hybridity generate ‘temporal hybridity’ when the goals, participants, and patterns of violent conflict change over time (Krause, 2013: 48-49). Peace agreements, for example, often do not signal the end of organized violence, but rather its evolution into new forms that may render the purported ‘peacetime’ more violent than the war that preceded it (Suhrki and Berdal, 2011).64 And “attempts to establish a monopoly over the legitimate use of force are often at odds with the various roles that violence plays in contemporary states, especially (but not exclusively) in postconflict contexts” (Krause, 2013: 39). In ways such as these, established binaries and typologies make implicit assumptions that can misrepresent reality and generate inappropriate policy responses (Geneva Declaration, 2011: 15, 18). The organization Geneva Declaration has developed one promising strategy to avoid such pitfalls with its ‘unified approach’ to violence. The framework attempts to count each and every violent death around the world without imposing familiar distinctions (such as between organized versus interpersonal violence) or focusing exclusively on particular categories (war or political violence versus criminal violence). As Geneva Declaration subtitled its 2015 report, “every body counts.”65 The organization assesses empirically the commonalities and differences between myriad instances of deadly violence, and attempts to find common underlying causes of – and causal linkages between – apparently separate forms of violence. This approach abandons the priority habitually bestowed upon ‘war’ by academics and policymakers alike, and adopts a more humanitarian orientation by aspiring to reduce the overall level of violence in the world regardless of the categories in which it may be placed.66

### 1NC – T

#### Interp: The 1AC plan text must defend a policy action.

#### "Resolved:" the appropriation of outer space by private entities is "unjust" entails policy action:

#### 1---Resolved.

Merriam Webster '18 (Merriam Webster; 2018 Edition; Online dictionary and legal resource; Merriam Webster, "resolve," <https://www.merriam-webster.com/dictionary/resolve;> RP)  
: a legal or official determination especially: a legislative declaration

#### 2---Unjust.

Black’s Law [The Law Dictionary Featuring Black's Law Dictionary Free Online Legal Dictionary 2nd Ed. No Date. <https://thelawdictionary.org/unjust/>] brett

What is UNJUST?

Contrary to right and justice, or to the enjoyment of his rights by another, or to the standards of conduct furnished by the laws.

#### Violation: There’s no plan, they defend the res as a general rule.

#### Prefer:

#### 1---Vagueness---debates inevitably involve the AFF defending something, but only our interp forces that to be clearly defined that from the start. Their model leads to late-breaking debates that destroy ground, for example we won’t know if asteroid mining or space exploration are offense until the 1AR, which skews neg prep.

#### 2---Topic ed---specific policies teaches lets us go deep into the topic, uniquely important given the evolving character of space law – outweighs bc we only have 2 month topics, and phil ed is solved by free textbooks.

#### Competing interpretations—it tells the negative what they do and do not have to prepare for. Reasonability is arbitrary and unpredictable, inviting a race to the bottom and we’ll win it links to our offense.

#### Drop the debater to deter future abuse and because the 2N doesn’t get new disads to whole rez so it’s permanently skewed.

### 1NC – T

#### Interp – the aff must only defend that the appropriation of outer space by private entities is unjust.

#### Resolved requires a policy

Merriam Webster '18 (Merriam Webster; 2018 Edition; Online dictionary and legal resource; Merriam Webster, "resolve," <https://www.merriam-webster.com/dictionary/resolve;> RP)  
: a legal or official determination especially: a legislative declaration

#### Private entity is defined by

Cornell Law n.d. “private entity” <https://www.law.cornell.edu/definitions/uscode.php?width=840&height=800&iframe=true&def_id=6-USC-625312480-168358316&term_occur=999&term_src=title:6:chapter:6:subchapter:I:section:1501> TG

(A) In general Except as otherwise provided in this paragraph, the term “private entity” means any person or private group, organization, proprietorship, partnership, trust, cooperative, corporation, or other commercial or nonprofit entity, including an officer, employee, or agent thereof.

#### Article 2 of the Outer Space Treaty defines outer space and appropriation

OST 66 “2222 (XXI). Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.” UN Office for Outer Space Affairs, 1499th plenary meeting, Dec 19, 1966, <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html> TG

ARTICLE II. Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.

#### Violation – they’re extra topical – they defend taxing billionares, nationalizing space industries and using it to solve terrestrial problems.

#### Vote neg for limits – extra-topicality allows them to tack on infinite planks to artificially improve aff solvency and spike out of DAs, like fiating enforcement or random possible modifications to extraterrestrial property rights. The counter-interp sets a precedent that the scope of aff fiat doesn’t have to be bounded by the resolution, which outweighs on magnitude. No drop the arg – we shouldn’t have to always read T just to get back to what we should’ve been debating to begin with – it incentivizes adding random extra-t planks because there’s no punishment.

### 1NC – Case

#### Space colonization is good and possible – new developing tech and adaptation solves civil war, extinction, civilization collapse, and exploration defense doesn’t apply.

Kennedy ’19 [Fred, served as the inaugural Director of the Defense Department’s Space Development Agency during 2019, and led the Defense Advanced Research Projects Agency’s Tactical Technology Office from 2017 to 2019. I served as a senior advisor for space and aviation in the White House Office of Science and Technology Policy in 2016, “To Colonize Space Or Not To Colonize: That Is The Question (For All Of Us)”, 12-18-2019, Forbes, https://www.forbes.com/sites/fredkennedy/2019/12/18/to-colonize-or-not-to-colonize--that-is-the-question-for-all-of-us/?sh=65a8d2702367]//pranav

It’s important to distinguish between colonize and explore. Exploration already enjoys broad approval here in America. In June, 77% of U.S. respondents told Gallup pollsters that NASA’s budget should either be maintained or increased – undeniable evidence of support for the American space program (as it’s currently constituted). By any measure, we’ve done an admirable job of surveying the solar system over the past 60 years – an essential first step in any comprehensive program of exploration. Unmanned probes developed and launched by the United States and the Soviet Union conducted flybys of the Moon and the terrestrial planets not long after we reached Earth orbit, and since then, we’ve flown by the outer planets. Multiple nations have placed increasingly sophisticated robotic emissaries on the surfaces of the Moon, Mars, Venus and Saturn’s largest moon, Titan. Most stunningly, in a tour de force of technology and Cold War chutzpah, the U.S. dispatched humans to set foot on another world, just 50 years and a few months ago. But after only six such visits, we never returned. Moon habitats in lava tubes, crops under glass domes, ice mining at the south pole? No. NASA’s Artemis program may place a man and a woman on the Moon again in 2024. But that’s hardly colonization. For perspective, let’s look closer to home. Sailors from an American vessel may have landed on Antarctica as early as 1821 – the claim is unverified – but no scientific expeditions “wintered” there for another 75 years. The first two of these, one Belgian and one British, endured extreme cold and privation – one inadvertently, the other by design. And yet, 200 years after the first explorer set foot on the continent, there are no permanent settlements (partially as a result of a political consensus reached in the late 1950s, but in no small part due to the difficulty of extracting resources such as ore or fossil fuels through kilometers of ice). Less than 5,000 international researchers and support staff comprise the “summer population” at the bottom of the world. That number dwindles to just 1,100 during the harsh Antarctic winter, requiring millions of tons of supplies and fuel to be delivered every year – none of which can be produced locally. To suggest that Antarctica is colonized would be far overstating the sustainability of human presence there. If Antarctica is hard, the Moon, Mars, asteroids, and interplanetary space will be punishingly difficult. Writing in Gizmodo this past July, George Dvorsky describes the challenges to a human colony posed by low gravity, radiation, lack of air and water, and the psychological effects of long-term confinement and isolation inside artificial structures, in space or on planetary surfaces. Add to this the economic uncertainties of such a venture – where the modern analog of a Dutch or British East India Company would face enormous skepticism from investors regarding the profitability of shipping any good or finished product between colonial ports of call – and it becomes clear why nation states and mega-corporations alike have so far resisted the temptation to set up camp beyond geosynchronous orbit. Perhaps, many argue, we should focus our limited resources on unresolved problems here at home? Yet a wave of interest in pursuing solar system colonization is building, whether its initial focus is the Moon, Mars, or O’Neill-style space habitats. Jeff Bezos has argued eloquently for moving heavy industry off the home planet, preserving Earth as a nature reserve, and building the space-based infrastructure that will lower barriers and create opportunities for vast economic and cultural growth (similar to how the Internet and a revolution in microelectronics has allowed Amazon and numerous other companies to achieve spectacular wealth). Elon Musk and Stephen Hawking both suggested the need for a “hedge” population of humans on Mars to allow human civilization to reboot itself in the event of a catastrophe on Earth – an eggs-in-several-baskets approach which actually complements the arguments made by Bezos. And while both are valid reasons for pursuing colonization, there’s a stronger, overarching rationale that clinches it. I’ll assert that a fundamental truth – repeatedly borne out by history – is that expanding, outwardly-focused civilizations are far less likely to turn on themselves, and far more likely to expend their fecundity on growing habitations, conducting important research and creating wealth for their citizens. A civilization that turns away from discovery and growth stagnates – a point made by NASA’s Chief Historian Steven Dick as well as Mars exploration advocate Robert Zubrin. As a species, we have yet to resolve problems of extreme political polarization (both internal to nation states as well as among them), inequalities in wealth distribution, deficiencies in civil liberties, environmental depredations and war. Forgoing opportunities to expand our presence into the cosmos to achieve better outcomes here at home hasn’t eliminated these scourges. What’s more, the “cabin fever” often decried by opponents of colonization (when applied to small, isolated outposts far from Earth) turns out to be a potential problem for our own planet. Without a relief valve for ideological pilgrims or staunch individualists who might just prefer to be on their own despite the inevitable hardships, we may well run the risk of exacerbating the polarization and internecine strife we strive so hard to quell. Focusing humanity’s attention and imagination on a grand project may well give us the running room we need to address these problems. But the decision cannot be made by one country, or one company, or one segment of the human population. If we do this, it will of necessity be a truly international endeavor, a cross-sector endeavor (with all commercial, civil, and defense interests engaged and cooperating). The good news: Critical technologies such as propulsion and power generation systems will improve over time. Transit durations between celestial destinations will shorten (in the same way sailing vessels gave way to steam ships and then to airliners and perhaps, one day, to point-to-point ballistic reusable rockets). Methods for obtaining critical resources on other planets will be refined and enhanced. Genetic engineering may be used to better adapt humans, their crops and other biota to life in space or on other planetary surfaces – to withstand the effects of low or micro-gravity, radiation, and the psychological effects of long-duration spaceflight.

#### It’s only 30 years away at minimum – *NOW* is the time for more private development not less.

UNSW ’21 [University of New South Wales, “Mars Settlement Likely by 2050 Says Expert – But Not at Levels Predicted by Elon Musk”, 03-19-2021, https://scitechdaily.com/mars-settlement-likely-by-2050-says-expert-but-not-at-levels-predicted-by-elon-musk/#:~:text=Mars%20will%20be%20colonized%20by,by%20NASA's%20Perseverance%20rover.]//pranav

Robotic mining that can provide water and fuel is the key to developing a colony on the red planet within the next 30 years.

Mars will be colonized by humans by the year 2050, as long as autonomous mining processes quickly become more commercially viable.

That’s the view of Professor Serkan Saydam from UNSW Sydney in the wake of the amazing landing on Mars by NASA’s Perseverance rover.

Perseverance is expected to provide answers about whether forms of life ever existed on the red planet, but it is also designed to help address the challenges of future human expeditions there.

Professor Saydam, from the School of Mineral Energy Resources Engineering, says the main focus in terms of creating a colony on Mars is finding water – and being able to extract it and process it using robots before humans land.

“Everything is all about water,” Prof. Saydam says. “You use water as a life support, plus also being able to separate out the hydrogen to use as an energy source.

#### Only private sector solves it

Diakovska & Aliieva 20 [Halyna Diakovska and Olga Aliieva, Ph.D.s in Philosophy, Associate Professors, Donbass State Pedagogical University, “Consequentialism and Commercial Space Exploration,” 2020, *Philosophy and Cosmology*, Vol. 24, pp. 5-24, https://doi.org/10.29202/phil-cosm/24/1, EA]

The experience of the USA showed that leadership in space exploration, which is maintained solely through public funding, could be erroneous. Since 1984, the share of public funding has gradually decreased in space telecommunications, commercial space transportation, remote sensing, etc., while the share of participation of non-state enterprises has increased rapidly. A legal and regulatory framework has been modified to stimulate space commercialization. The stages of space law development are discussed in the research of Valentyn Halunko (Halunko, 2019), Larysa Soroka (Soroka & Kurkova, 2019), etc. Larysa Soroka and Kseniia Kurkova explored the specifics of the legal regulation of the use and development of artificial intelligence for the space area (Soroka & Kurkova, 2019).

As a result of changing the legal framework and attracting private investors to the space market, the US did not lose its leadership in space exploration, but rather secured it. Private investment along with government funding have significantly reduced the risk of business projects in the space industry. The quality and effectiveness of space exploration programs have increased.

In 2018, Springer published an eloquent book The Rise of Private Actors in the Space Sector. Alessandra Vernile, the author of the book, explores a broad set of topics that reveal the role of private actors in space exploration (Vernile, 2018). The book covers the following topics: “Innovative Public Procurement and Support Schemes,” “New Target Markets for Private Actors,” etc. In the “Selected Success Stories,” Vernile provides examples of successful private actors in space exploration (Vernile, 2018).

The current level of competition, which has developed on the space market, allows us to state the following fact. Private space companies have been able to compete with entire states in launching spacecraft, transporting cargo to orbital stations, and exploring space objects. The issue of mining on space objects, the creation of space settlements and the intensive development of the space tourism market are on the agenda.

In the 21st century, the creation of non-governmental commercial organizations specializing in the field of commercial space exploration, is regarded as an ordinary activity. They are established as parts of the universities around projects funded by private investors. For example, Astropreneurship & Space Industry Club based on the MIT community (Astropreneurship, 2019).

Large-scale research in the field of commercial space exploration, as well as the practical results achieved, led to the formation of a new paradigm called “New Space” ecosystem. The articles of Deganit Paikowsky’s (Paikowsky, 2017), Clelia Iacomino (Iacomino & Ciccarelli, 2018) et al. reveal its key meanings and the opportunities it offers in the space sector. The “New Space” ecosystem is a new vision for commercial space exploration. It is the formation of a cosmic worldview, in which the near space with all the wealth of its resources and capabilities, becomes a part of the global economy and the sustainable development of the society. The “New Space” ecosystem offers the following ways for commercial space exploration (Iacomino & Ciccarelli, 2018):

1. Innovative public procurement and support schemes, which significantly expand the role of commercial actors in space exploration.

2. Attracting new entrants in the space sector. First of all, these are companies working in the domain of Information and communications technology, artificial intelligence, etc. that are expanding their research in space markets. They offer innovative business models and new solutions to space commercialization.

3. Innovative industrial approaches based on new processes, methods, and industrial organization for the development and production of space systems or launchers.

4. Disruptive market solutions, which significantly reduce commercial space exploration prices, increase labor productivity, provide new types of services, etc.

5. Substantial private investment from different sources and involving different funding mechanisms. For instance, these are private fortunes, venture capital firms, business angels, private equity companies, or banks, etc.

6. Involvement of an increasing number of space-faring nations investing in the acquisition of turnkey space capabilities or even in the development of a domestic space industrial base. This expands the space markets and makes it more competitive.

The analysis of the research and advances in commercial space exploration allows us to draw the following conclusions:

1. In fact, the space market has already been created. It is currently undergoing continuous development that will integrate the resources and capabilities of the near space into the global economy over the next decade.

2. A new paradigm, denoted by the term “New Space” ecosystem, is at the heart of the created space market. The “New Space” ecosystem is a step towards the formation of cosmic thinking, in which outer space, with its resources and capabilities, is considered as a sphere of human activities.

3. Space market regulates space law, which is constantly evolving. The space law develops within the bounds of international law. In essence, the space market is integrated into the international legal field and is governed by its laws.

#### Colony violence is wrong – settlement solves it AND nuclear war – Overview Effect proves.

Globus ’20 [Al, co-founded the NASA Ames Space Settlement Contest for 6-12th grade students. 6-12th grade students. He also co-founded the NASA Ames Nanotechnology Group, which, at first, worked on materials for space elevators and diamondoid machine phase matter to build $50,000 personal spacecraft. He has designed three orbital space settlements (Lewis One, Kalpana One, and Kalpana Two) and published over 45 papers in technical conferences and journals, won a Feynman Prize in Nanotechnology, a NASA Software of the Year award, and a NASA Public Service Medal. He has discussed space colonization and nanotechnology on the History Channel, Danish radio, a French magazine, on a European Commission video, and elsewhere. He is co-author of the book The High Frontier: An Easier Way, “Not so dark skies”, 07-13-2020, https://www.thespacereview.com/article/3985/1]//pranav

War (Geopolitical Malefic)

Argument: Space settlement creates an endless frontier extending for millions of light-years into the cosmos. Frontiers tend to be violent places, creating wars not only at the frontier but between the polities that support the expansion. The vast size of the cosmos means that settlers are widely separated for much of the time, perhaps even evolving new species. When they come close enough to interact there may be little fellow feeling and little reluctance for the stronger to exterminate the weaker.

Counter-argument: With space settlement development there are a number of factors inhibiting violence and warfare. For one, the vast energy and materials resources available will tend to make resource wars obsolete. The fragility of space settlements, particularly free-space settlements in orbit, mandates that settlers avoid pointless provocations and chest-beating exercises. The enormous size of the space inhabited, up to and including the entire galaxy, makes it extremely unlikely that war will consume more than a small fraction of the population and resources available. It is difficult, if not impossible, to predict whether space settlement will lead to an increase or decrease in the odds that any given individual or group is involved in warfare or not. Preventing space settlement may be more or less dangerous than allowing it to proceed; it’s impossible to say.

Comparison with no space settlement: It is reassuring that since World War II warfare has decreased substantially and rarely involves the great powers directly killing each other’s citizens. That is left to proxies. However, not all wars are intentional. Consider World War I and the Cuban Missile Crisis. These suggest that there is a possibility—some would say probability—of an accidental humanity-ending nuclear war.

Space settlement could reduce this probability a bit by exposing large numbers of people to the Overview Effect created by the view of Earth from space, where some astronauts have come to value Earth and the unity of Earth’s people much more than before. More substantively, a sufficiently developed space settlement society surviving a war can repopulate Earth and restock other species if prevention fails. Thus the chance of a humanity-ending nuclear war is much lower with a sufficiently advanced space settlement society.

#### New technocratic totalitarianism is empirically wrong, and settlement solves the internal link.

Globus ’20 [Al, co-founded the NASA Ames Space Settlement Contest for 6-12th grade students. 6-12th grade students. He also co-founded the NASA Ames Nanotechnology Group, which, at first, worked on materials for space elevators and diamondoid machine phase matter to build $50,000 personal spacecraft. He has designed three orbital space settlements (Lewis One, Kalpana One, and Kalpana Two) and published over 45 papers in technical conferences and journals, won a Feynman Prize in Nanotechnology, a NASA Software of the Year award, and a NASA Public Service Medal. He has discussed space colonization and nanotechnology on the History Channel, Danish radio, a French magazine, on a European Commission video, and elsewhere. He is co-author of the book The High Frontier: An Easier Way, “Not so dark skies”, 07-13-2020, https://www.thespacereview.com/article/3985/1]//pranav

Totalitarian world government (Hierarchy Enablement)

Argument: According to Deudney, “The further large-scale expansion of human activity into solar space is likely to facilitate the emergence of a highly hierarchical world government on… Earth that could then be prone to become totalitarian” due to military pressure on Earth.

Counter-argument: The hypothesized facilitation of highly hierarchical world government is due to the hypothesized threat of attack specifically:

Bombardment by asteroids. But as we have seen, asteroids make inferior weapons.

Attack from low Earth orbit. In this scenario one entity controls Earth and another controls the orbital space near Earth, which can then be used to launch attacks. However, if a single entity controls both, this threat becomes moot.

With regard to turning totalitarian, it should be noted that none of the classic totalitarian states (Soviet Union, Germany, Italy, North Korea, and China) were subject to significantly more threat than other countries which did not turn totalitarian (e.g., the United Kingdom, France, Switzerland, etc.), suggesting that external pressure is not necessarily the driver towards totalitarianism. Indeed, South and North Korea shows that very similar countries in similar circumstance can be driven to either totalitarianism or democracy.

Comparison with no space settlement: If there is no settlement then there cannot be a threat originating from settlements so a comparison makes no sense.

#### Space colonization solves otherwise inevitable extinction.

Zarkadakis 19 [George; December 26; Ph.D. in Artificial Intelligence; George Zardakis, “Abandoning the metropolis: space colonisation as the new imperative,” <https://georgezarkadakis.com/2019/12/26/abandoning-the-metropolis-space-colonisation-as-the-new-imperative/>]

Space colonization is not only the subject of fiction but of serious science too. The late physicist Stephen Hawking argued that unless colonies were established in space the human race would become extinct. There are several natural phenomena beyond our control that could spell our obliteration. Over a long enough period of time our planet is vulnerable to catastrophic meteorite strikes, or getting exposed to the deadly radiation of a nearby supernova explosion. As our Sun burns its fuel it will start to expand and, in a few million years, will scorch Earth. We can also self-destruct by waging nuclear war, or by tilting our planet’s climate towards a runaway greenhouse effect. Space colonization is therefore the ultimate insurance policy of long-term human survival[4].

#### Growth is sustainable and solves a laundry list of threats.

Mark Budolfson 21. PhD in Philosophy. Assistant Professor in the Department of Environmental and Occupational Health and Justice at the Rutgers School of Public Health and Center for Population–Level Bioethics "Arguments for Well-Regulated Capitalism, and Implications for Global Ethics, Food, Environment, Climate Change, and Beyond". Cambridge Core. 5-7-2021. https://www-cambridge-org.proxy.library.emory.edu/core/journals/ethics-and-international-affairs/article/arguments-for-wellregulated-capitalism-and-implications-for-global-ethics-food-environment-climate-change-and-beyond/96F422D04E171EECDEF77312266AE9DD

Discourse on food ethics often advocates the anti-capitalist idea that we need less capitalism, less growth, and less globalization if we want to make the world a better and more equitable place, with arguments focused on applications to food, globalization, and a just society. For example, arguments for this anti-capitalist view are at the core of some chapters in nearly every handbook and edited volume in the rapidly expanding subdiscipline of food ethics. None of these volumes (or any article published in this subdiscipline broadly construed) focuses on a defense of globalized capitalism.1

More generally, discourse on global ethics, environment, and political theory in much of academia—and in society—increasingly features this anti-capitalist idea as well.2 The idea is especially prominent in discourse surrounding the environment, climate, and global poverty, where we face a nexus of problems of which capitalism is a key driver, including climate change, air and water pollution, the challenge of feeding the world, ensuring sustainable development for the world's poorest, and other interrelated challenges.

It is therefore important to ask whether this anti-capitalist idea is justified by reason and evidence that is as strong as the degree of confidence placed in it by activists and many commentators on food ethics, global ethics, and political theory, more generally.

In fact, many experts argue that this anti-capitalist idea is not supported by reason and argument and is actually wrong. The main contribution of this essay is to explain the structure of the leading arguments against the anti-capitalist idea, and in favor of the opposite conclusion. I begin by focusing on the general argument in favor of well-regulated globalized capitalism as the key to a just, flourishing, and environmentally healthy world. This is the most important of all of the arguments in terms of its consequences for health, wellbeing, and justice, and it is endorsed by experts in the empirically minded disciplines best placed to analyze the issue, including experts in long-run global development, human health, wellbeing, economics, law, public policy, and other related disciplines. On the basis of the arguments outlined below, well-regulated capitalism has been endorsed by recent Democratic presidents of the United States such as Barack Obama, and by progressive Nobel laureates who have devoted their lives to human development and more equitable societies, as well as by a wide range of experts in government and leading nongovernmental organizations.

The goal of this essay is to make the structure and importance of these arguments clear, and thereby highlight that discourse on global ethics and political theory should engage carefully with them. The goal is not to endorse them as necessarily sound and correct. The essay will begin by examining general arguments for and against capitalism, and then turn to implications for food, the environment, climate change, and beyond.

Arguments for and against Forms of Capitalism

The Argument against Capitalism

Capitalism is often argued to be a key driver of many of society's ills: inequalities, pollution, land use changes, and incentives that cause people to live differently than in their ideal dreams. Capitalism can sometimes deepen injustices. These negative consequences are easy to see—resting, as they do, at the center of many of society's greatest challenges.3

And at the same time, it is often difficult to see the positive consequences of capitalism.4 What are the positive consequences of allowing private interests to clear-cut forests and plant crops, especially if those private interests are rich multinational corporations and the forests are in poor, developing countries whose citizens do not receive the profits from deforestation? Why give private companies the right to exploit resources at all, since exploitation almost always has some negative consequences such as those listed above? These are the right questions to ask, and they highlight genuine challenges to capitalism. And in light of these challenges, it is reasonable to consider the possibility that perhaps a different economic system altogether would be more equitable and beneficial to the global population.

The Argument for Well-Regulated Capitalism

However, things are more complicated than the arguments above would suggest, and the benefits of capitalism, especially for the world's poorest and most vulnerable people, are in fact myriad and significant. In addition, as we will see in this section, many experts argue that capitalism is not the fundamental cause of the previously described problems but rather an essential component of the best solutions to them and of the best methods for promoting our goals of health, well-being, and justice.

To see where the defenders of capitalism are coming from, consider an analogy involving a response to a pandemic: if a country administered a rushed and untested vaccine to its population that ended up killing people, we would not say that vaccines were the problem. Instead, the problem would be the flawed and sloppy policies of vaccine implementation. Vaccines might easily remain absolutely essential to the correct response to such a pandemic and could also be essential to promoting health and flourishing, more generally.

The argument is similar with capitalism according to the leading mainstream arguments in favor of it: Capitalism is an essential part of the best society we could have, just like vaccines are an essential part of the best response to a pandemic such as COVID-19. But of course both capitalism and vaccines can be implemented poorly, and can even do harm, especially when combined with other incorrect policy decisions. But that does not mean that we should turn against them—quite the opposite. Instead, we should embrace them as essential to the best and most just outcomes for society, and educate ourselves and others on their importance and on how they must be properly designed and implemented with other policies in order to best help us all. In fact, the argument in favor of capitalism is even more dramatic because it claims that much more is at stake than even what is at stake in response to a global pandemic—what is at stake with capitalism is nothing less than whether the world's poorest and most vulnerable billion people will remain in conditions of poverty and oppression, or if they will instead finally gain access to what is minimally necessary for basic health and wellbeing and become increasingly affluent and empowered. The argument in favor of capitalism proceeds as follows:

Premise 1. Development and the past. Over the course of recorded human history, the majority of historical increases in health, wellbeing, and justice have occurred in the last two centuries, largely as a result of societies adopting or moving toward capitalism. Capitalism is a relevant cause of these improvements, in the sense that they could not have happened to such a degree if it were not for capitalism and would not have happened to the same degree under any alternative noncapitalist approach to structuring society. The argument in support of this premise relies on observed relationships across societies and centuries between indicators of degree of capitalism, wealth, investments in public goods, and outcomes for health, wellbeing, and justice, together with econometric analysis in support of the conclusion that the best explanation of these correlations and the underlying mechanism is that large increases in health, wellbeing, and justice are largely driven by increasing investments in public goods. The scale of increased wealth necessary to maximize these investments requires capitalism. Thus, as capitalist societies have become dramatically wealthier over the past hundred years (and wealthier than societies with alternative systems), this has allowed larger investments in public goods, which simply has not been possible in a sustained way in societies without the greater wealth that capitalism makes possible. Important investments in public goods include investments in basic medical knowledge, in health and nutrition programs, and in the institutional capacity and know-how to regulate society and capitalism itself. As a result, capitalism is a primary driver of positive outcomes in health and wellbeing (such as increased life expectancy, lowered child and maternal mortality, adequate calories per day, minimized infectious disease rates, a lower percentage and number of people in poverty, and more reported happiness);5 and in justice (such as reduced deaths from war and homicide; higher rankings in human rights indices; the reduced prevalence of racist, sexist, homophobic opinions in surveys; and higher literacy rates).6 These quantifiable positive consequences of global capitalism dramatically outweigh the negative consequences (such as deaths from pollution in the course of development), with the result that the net benefits from capitalism in terms of health, wellbeing, and justice have been greater than they would have been under any known noncapitalist approach to structuring society.7

Premise 2. Economics, ethics, and policy. Although capitalism has often been ill-regulated and therefore failed to maximize net benefits for health, wellbeing, and justice, it can become well-regulated so that it maximizes these societal goals, by including mechanisms identified by economists and other policy experts that do the following:

* optimally8 regulate negative effects such as pollution and monopoly power, and invest in public goods such as education, basic healthcare, and fundamental research including biomedical knowledge (more generally, policies that correct the failures of free markets that economists have long recognized will arise from “externalities” in the absence of regulation);9
* ensure equity and distributive justice (for example, via wealth redistribution);10
* ensure basic rights, justice, and the rule of law independent of the market (for example, by an independent judiciary, bill of rights, property rights, and redistribution and other legislation to correct historical injustices due to colonialism, racism, and correct current and historical distortions that have prevented markets from being fair);11 and
* ensure that there is no alternative way of structuring society that is more efficient or better promotes the equity, justice, and fairness goals outlined above (by allowing free exchange given the regulations mentioned).12

To summarize the implication of the first two premises, well-regulated capitalism is essential to best achieving our ethical goals—which is true even though capitalism has certainly not always been well regulated historically. Society can still do much better and remove the large deficits in terms of health, wellbeing, and justice that exist under the current inferior and imperfect versions of capitalism.

Premise 3. Development and the future. If the global spread of capitalism is allowed to continue, desperate poverty can be essentially eliminated in our lifetimes. Furthermore, this can be accomplished faster and in a more just way via well-regulated global capitalism than by any alternatives. If we instead opt for less capitalism, less growth, and less globalization, then desperate poverty will continue to exist for a significant portion of the world's population into the further future, and the world will be a worse and less equitable place than it would have been with more capitalism. For example, in a world with less capitalism, there would be more overpopulation, food insecurity, air pollution, ill health, injustice, and other problems. In part, this is because of the factors identified by premise 1, which connect a turn away from capitalism with a turn away from continuing improvements in health, wellbeing, and justice, especially for the developing world. In addition, fertility declines are also a consequence of increased wealth, and the size of the population is a primary determinant of food demand and other environmental stressors.13 Finally, as discussed at length in the next section of the essay, capitalism can be naturally combined with optimal environmental regulations.14 Even bracketing anything like optimal regulation, it remains true that sufficiently wealthy nations reduce environmental degradation as they become wealthier, whereas developing nations that are nearing peak degradation will remain stuck at the worst levels of degradation if we stall growth, rather than allowing them to transition to less and less degradation in the future via capitalism and economic growth.15 In contrast, well-regulated capitalism is a key part of the best way of coping with these problems, as well as a key part of dealing with climate change, global food production, and other specific challenges, as argued at length in the next section. Here it is important to stress that we should favor well-regulated capitalism that includes correct investments in public goods over other capitalist systems such as the neoliberalism of the recent past that promoted inadequately regulated capitalism with inadequate concern for externalities, equity, and background distortions and injustices.16

Conclusion. Therefore, we should be in favor of capitalism over noncapitalism, and we should especially favor well-regulated capitalism, which is the ethically optimal economic system and is essential to any just basic structure for society.

This argument is impressive because, as stated earlier in the essay, it is based on evidence that is so striking that it leads a bipartisan range of open-minded thinkers and activists to endorse well-regulated capitalism, including many of those who were not initially attracted to the view because of a reasonable concern for the societal ills with which we began. To better understand why such a range of thinkers could agree that well-regulated capitalism is best, it may help to clarify some things that are not assumed or implied by the argument for it, which could be invoked by other bad arguments for capitalism.

One thing the argument above does not assume is that health, wellbeing, or justice are the same thing as wealth, because, in fact, they are not. Instead, the argument above relies on well-accepted, measurable indicators of health and wellbeing, such as increased lifespan; decreased early childhood mortality; adequate nutrition; and other empirically measurable leading indicators of health, wellbeing, and justice.17 Similarly, the argument that capitalism promotes justice, peace, freedom, human rights, and tolerance relies on empirical metrics for each of these.18

Furthermore, the argument does not assume that because these indicators of health, wellbeing, and justice are highly correlated with high degrees of capitalism, that therefore capitalism is the direct cause of these good outcomes. Rather, the analyses suggest instead that something other than capitalism is the direct cause of societal improvements (such as improvements in knowledge and technology, public infrastructure, and good governance), and that capitalism is simply a necessary condition for these improvements to happen.19 In other words, the richer a society is, the more it is able to invest in all of these and other things that are the direct causes of health, wellbeing, and justice. But, to maximize investment in these things societies need well-regulated capitalism.

As part of these analyses, it is often stressed that current forms of capitalism around the world are highly defective and must be reformed in the direction of well-regulated capitalism because they lack investments in public goods, such as basic knowledge, healthcare, nutrition, other safety nets, and good governance.20 In this way, an argument for a particular kind of progressive reformism is an essential part of the analyses that lead many to endorse the more general argument for well-regulated capitalism.

Although these analyses are nuanced, and appropriately so, it remains the case that the things that directly lead to health, wellbeing, and justice require resources, and the best path toward generating those resources is well-regulated capitalism. And on the flip side, according to the analyses behind premise 1 described above, an anti-capitalist system would not produce the resources that are needed, and would thus be a disaster, especially for the poorest billion people who are most desperately in need of the resources that capitalism can create and direct, to escape from extreme poverty.21

#### Free markets key to solve disease cures

Jackson 16. Kerry, Pacific Research Institute; 12/19/16; Free Market Policies Needed To Incentivize Creation Of New Life-Saving Treatments; https://www.pacificresearch.org/article/free-market-policies-needed-to-incentivize-creation-of-new-life-saving-treatments/

“Our strongest antibiotics don’t work and patients are left with potentially untreatable infections,” Director Dr. Tom Frieden said when the CDC issued its warning. He asked doctors, hospitals and public health officials to “work together” to “stop these infections from spreading.” The 2014 Report to the President expressed a similar concern: “The evolution of antibiotic resistance is now occurring at an alarming rate and is outpacing the development of new countermeasures capable of thwarting infections in humans. This situation threatens patient care, economic growth, public health, agriculture, economic security and national security.” For those thinking this sort of thing shouldn’t be happening when medical science is more advanced than can almost be conceived, be assured that it is. And unless there are public policy interventions, it’s likely to get worse. “More and more microorganisms will continue to gain resistance to the current drug therapies because (antimicrobial resistance, or AMR) is basic evolution,” Wayne Winegarden writes in the Pacific Research Institute’s newly-released report “Incenting the Development of Antimicrobial Medicines to Address the Problem of Drug-Resistant Infections.” The International Federation of Pharmaceutical Manufacturers says the problem is caused by “a dearth of new antibiotic medicines.” At the same time that there’s been an increase in AMR, there has been “a sharp decline in the development of new antibiotic medicines.” The group reports that only two new classes of antibiotics have been discovered in the last three decades compared to 11 in the previous 50 years. The answers to many medical problems are still not within reach of researchers. But the hazards of AMR can be diminished. Winegarden suggests we begin with public health campaigns that encourage handwashing, which he calls a highly effective and low-cost way to reduce the spread of infection. He further recommends policy that would address the problem of antibiotic overuse and greater use of vaccines to cut the incidents of infection. But Winegarden’s primary concern is establishing the correct incentives for developing new antimicrobial medicines that would be effective against AMR microorganisms. He’s specifically referring to policies “based on a thorough understanding of the disincentives that are currently inhibiting their development.” “These disincentives are well-recognized,” he writes. “Despite the medical need, and despite the generally strong return on investment for many other drug classes, the return on investment for developing new antimicrobial medicines (particularly antibiotics) is too low.” Producing a new drug is a grinding and expensive endeavor. It can take 10 to 15 years to develop a single prescription drug that is introduced to the market, and a company can spend as much as $5.5 billion on research and development for each medication that is eventually approved and prescribed. Less than 2 percent of all projects launched to create new drugs succeed. This is not an environment in which pharmaceutical companies can get too amped up about pursuing new treatments. Yet new drug approvals increased over the last decade. Don’t look for a surge of antimicrobial drugs in that pipeline, though. Winegarden says that particular drug class is among several that “face unique impediments” that serve as disincentives for innovation. To overcome the steep hill that impedes the development of new AMR drugs, lawmakers must implement policies that unleash the incentives of the free market. Policymakers also should look at the 1983 federal Orphan Drug Act and its market-oriented reforms that increased the number of drugs developed to treat rare diseases. More than 400 have been introduced to the market since the law was enacted, compared to fewer than 10 in the 1970s. Put another way, government needs to remove its anchors from the process and let the market do what it does so well. In this case, that’s restoring patients’ health, enriching innovative companies that create jobs, and inspiring biotech start-ups such as the group of Stanford undergraduates that has been capitalized to develop new antibiotics. If the proper incentives are in place, the needed treatments will follow.

#### Pandemics end civilization – no burnout

Kerscher 14. Karl-Heinz, professor and management consultant “Space Education”, Wissenschaftliche Studie, 2014

The death toll for a pandemic is equal to the virulence, the deadliness of the pathogen or pathogens, multiplied by the number of people eventually infected. It has been hypothesized that there is an upper limit to the virulence of naturally evolved pathogens. This is because a pathogen that quickly kills its hosts might not have enough time to spread to new ones, while one that kills its hosts more slowly or not at all will allow carriers more time to spread the infection, and thus likely out-compete a more lethal species or strain. This simple model predicts that if virulence and transmission are not linked in any way, pathogens will evolve towards low virulence and rapid transmission. However, this assumption is not always valid and in more complex models, where the level of virulence and the rate of transmission are related, high levels of virulence can evolve. The level of virulence that is possible is instead limited by the existence of complex populations of hosts, with different susceptibilities to infection, or by some hosts being geographically isolated. The size of the host population and competition between different strains of pathogens can also alter virulence. There are numerous historical examples of pandemics that have had a devastating effect on a large number of people, which makes the possibility of global pandemic a realistic threat to human civilization.

#### Independently profit motive key to effective resource management

Fitzmaurice 15. Matthew, CEO, EcoAlpha Asset Management LLC. “ONLY CAPITALISM CAN SAVE THE PLANET,” Ensla. 3/23/2015. http://ensia.com/voices/only-capitalism-can-save-the-planet/

Here’s the thing, though: where there are problems to be solved, there’s money to be made. And where there’s money to be made, we awaken one of the world’s most powerful forces for change: capitalism. ¶ Of course capitalism has played a starring role in distressing the planet’s resources. Historically, the combination of unchecked industry, a readiness to externalize costs and a relentless thirst for growth have plundered and polluted the earth. It’s not a debate, but simple fact that our population size and economies cannot continue on their present trajectories without exhausting the world’s resources. Yet, a rapidly expanding global middle class — increasingly urbanized and hungry for protein — threatens further and accelerating distress. ¶ The hopeful news is that businesses, with their almost singular focus on economic self-interest, and governments, motivated by a variety of interests, are beginning to recognize and address in earnest these inevitable problems. ¶ Today, the businesses that develop practical and affordable solutions to burdened resource problems will end up being the world’s most profitable companies. No longer can they be considered “sustainability” businesses. They are everyday businesses with a long view, targeting problems that are not going away. That’s smart business. Burdened resources have become a strong economic driver for businesses of all sizes, in all industries everywhere to spend and change — and one that will only grow in scope and intensity over time. ¶ The companies that provide effective solutions to burdened resources will provide superior risk-adjusted returns to their investors as business and governments accelerate their solutions spending out of their own economic self-interest. And because the products, technologies and services these companies provide are common solutions to global problems — and are therefore exponentially repeatable — these investments will have amplified positive impact on global resource scarcity issues. ¶ Too often people have a narrow view of these solutions, thinking only of solar panels and windmills. But solutions are enormously diverse: They include, among many others, agricultural drones that monitor soil conditions, smart irrigation technology that delivers water only where and when it’s really needed, more efficient distributed energy generation and component suppliers that make cars use less gas. ¶ We face a new reality in which our economic self-interest and the long-term well-being of the planet are coming into alignment.¶ As a whole, the human race has a poor track record when it comes to altruism. Although there are a great many saints among us who spend — and even sacrifice — their lives to help others, most of us are hard pressed to take care of ourselves and our families. We have a much better track record when it comes to investing money in our own self- interest, which has fueled the unprecedented innovation, economic and life-expectancy growth of the past century. ¶ In the past, many people who invested in sustainable solutions were motivated principally by conscience, willing to accept reduced returns in order to invest their money in a way that was consistent with their beliefs and convictions — be they religious, social or environmental. Now, however, we face a new reality in which our economic self-interest and the long-term well-being of the planet are coming into alignment. Because we have to face the reality of burdened resources, there’s money in it. ¶ Recently, some asset managers have based investments on environmental, social and governance screening, betting that good corporate citizens are inherently better-managed companies, which will therefore be more profitable over time. Increasingly, however, ESG screening is becoming more pervasive and will likely over time become commonplace, robbing this sort of screening as a differentiator when making investment decisions. ¶ The primary goal for investing in sustainable solutions is to achieve superior risk-adjusted returns. Companies that provide solutions to the issues of burdened resources will be the recipients of a massive global spend cycle, no matter one’s motivation. The fact that one’s investment is also part of the solution rather than the problem is worth getting excited about. Self-interest is what moves markets. According to McKinsey’s report, How to make Green Growth the new normal, “In order to mobilize the US$3 trillion a year that will be needed to build a resource-efficient growth model, investing in the markets of the future needs to be seen as possessing superior risk-return characteristics.”¶ No government subsidy or charity case can move the needle for long. Only capitalism has the power to retool industries, reshape economies and rebuild infrastructure across the planet. It’s a big part of what got us into this mess, but it’s also what will get us out.

#### Ineffective resource management degrades public health, kills global air quality, and causes tensions over water scarcity in South Asia—culminates in extinction

Thompson 13. Thomas, President of Analytics Inc., a financial research and economic analysis firm. Citing Wang Shucheng, China’s former minister of water resources. “Choking on China,” Foreign Affairs. 6/8/2013. https://www.foreignaffairs.com/articles/china/2013-04-08/choking-china

The dangers of China’s environmental degradation go well beyond the country’s borders, as pollution threatens global health more than ever. Chinese leaders have argued that their country has the right to pollute, claiming that, as a developing nation, it cannot sacrifice economic growth for the sake of the environment. In reality, however, China is holding the rest of the world hostage -- and undermining its own prosperity.¶ According to the World Bank, only one percent of China’s 560 million urban residents breathe air considered safe by EU standards. Beijing’s levels of PM2.5s -- particles that are smaller than 2.5 micrometers in diameter and can penetrate the gas exchange regions of the lungs -- are the worst in the world. Beijing’s 2012 March average reading was 469 micrograms of such particles per cubic meter, which compares abysmally with Los Angeles’ highest 2012 reading of 43 micrograms per cubic meter.¶ Such air pollution contributed to 1.2 million premature deaths in China in 2010, according to the Global Burden of Disease Study. The unrelenting pace of construction of coal-fired power plants is only making matters worse. In his recent monograph, Climate Change: The China Problem, environmental scholar Michael Vandenbergh writes, “On average, a new coal-powered electric plant large enough to serve a city the size of Dallas opens in China every seven to ten days.” The lack of widespread coal-washing infrastructure and scrubbers at Chinese industrial facilities exacerbates the problem.¶ Carbon dioxide emissions from cars in China are also growing exponentially, replacing coal-fired power plants as the major source of pollution in major Chinese cities. Deutsche Bank estimates that the number of passenger cars in China will reach 400 million by 2030, up from today’s 90 million. And the sulfur levels produced by diesel trucks in China are at least 23 times worse than those in the United States. Acid rain, caused by these emissions, has damaged a third of China’s limited cropland, in addition to forests and watersheds on the Korean Peninsula and in Japan. This pollution reaches the United States as well, sometimes at levels prohibited by the U.S. Clean Water Act. In 2006, researchers at the University of California–Davis discovered that almost all of the harmful particulates over Lake Tahoe originated in China. The environmental experts Juli Kim and Jennifer Turner note in their essay “China’s Filthiest Export” that “by the time it reaches the U.S., mercury transforms into a reactive gaseous material that dissolves easily in the wet climates of the Pacific Northwest.” At least 20 percent of the mercury entering the Willamette River in Oregon most likely comes from China. Black carbon soot from China also threatens to block sunlight, lower crop yields, heat the atmosphere, and destabilize weather throughout the Pacific Rim.¶ China’s use of fresh water resources also threatens those beyond its borders. As Mark Twain reportedly said, in reference to California in the late nineteenth century, “Whiskey is for drinking; water is for fighting over.” The sentiment holds true in modern-day Asia as well. Asia’s per capita fresh water availability is less than half the global average. China and India, for example, are home to 40 percent of the world’s population but make do with ten percent of the world’s fresh water. China is guzzling and polluting this limited resource at an alarming rate. The country has dammed every major river on the Tibetan plateau, including the Mekong, the Salween, the Brahmaputra, the Yangtze, the Yellow, the Indus, the Sutlej, the Shweli, and the Karnali, and there are large-scale plans to dam others. Of the 50,000 largest dams in the world, more than half are in China. As a result, China now controls the river water supply to 13 nearby countries but so far has refused to sign any treaties or cooperate with other countries on water issues. Beijing also voted against the UN attempt to regulate water sharing in the region. China’s former minister of water resources, Wang Shucheng, described China’s water policy as “fight for every drop of water or die.” This philosophy, combined with China’s unabated pursuit of economic development, will have profoundly destabilizing consequences for the region, both politically and environmentally.¶ Unfortunately for China, compromising the environment and health in pursuit of economic growth is not a sustainable strategy. The threat of water scarcity and the adverse domestic health effects of pollution darken China’s future. Pollution-related illnesses are soaring. A recent social media campaign led by locals and international activities shed light on the growing phenomena of “cancer villages” -- areas where water pollution is so bad that it has led to a sharp rise in diseases like stomach cancer. China’s own Ministry of Environmental Protection has concluded that 70 percent of the country’s major waterways are heavily polluted. According to Scott Moore of the Sustainability Science Program at Harvard’s Kennedy School of Government, pollutants have even seeped into the country’s subsurfaces, with more than half of monitored wells deemed unsafe to use for drinking water. The China Geological Survey now estimates that 90 percent of China’s cities depend on polluted groundwater supplies. Water that has been purified at treatment plants is often recontaminated en route to homes. China has plundered its groundwater reserves, drilling massive underground tunnels that have even caused some cities to literally sink.¶ China has also completely botched its waste-removal efforts. Eighty percent of the East China Sea, one of the world’s largest fisheries, is now unsuitable for fishing, according to Elizabeth C. Economy, a China and environmental expert at the Council on Foreign Relations. Most Chinese coastal cities pump at least half of their waste directly into the ocean, which causes red tides and coastal fish die-offs. According to the World Wildlife Fund, the country is now the largest polluter of the Pacific Ocean.¶ The economic costs of pollution have been the focus of various government-backed studies in China. A recent study by the Chinese Academy of Environmental Planning found that environmental damage to forests, wetlands, and grasslands shaved 3.5 percent off China’s 2012 GDP. The World Bank puts the total cost of China’s environmental degradation in the late 1990s at between 3.5 and 8 percent of GDP. China’s pollution problem is holding back its economy -- and poisoning its own people and the rest of the world in the process. The international community should push China to realize that if it continues to ravage the environment, it will be unable to secure its future health and prosperity -- or avoid a global disaster.

#### Causes India-China war.

Williams 13. Jessica, masters degree in International Relations from University of Cardiff, "The International Implications of China's Water Policies," master's degree dissertation, February 15, www.e-ir.info/2013/02/15/chinas-water-policies-and-their-international-implications/

Keeping Sino-Indian border issues separate from water disputes is, however, unlikely as the current Indian government is too weak to compromise on issues of ‘national honour’ (Malhotra-Arora 2012, p.154). Any concession to China on border issues, or failure of the government to take action against China diverting the Brahmaputra, will likely be greeted with strong public opposition. China will probably ~~look~~ \*try to use water as a tool to pressurise India and gain concessions on boundary issues (IDSA Task Force 2010, p.49). Separating these issues is also complicated by the Brahmaputra supplying water to Arunachal Pradesh, which both China and India claim (Chellaney & Tellis 2011, para.11). China refuses to recognise Arunachal Pradesh as part of India, instead referring to it as ‘Southern Tibet’ (Bajpaee 2010, para.3). China’s assertion means that it claims almost 200 million feet3 s– of water resources in the state (IDSA Task Force 2010, p.44). Therefore, a water dispute in this area could easily turn into a wider dispute about territory, where tensions are already high. Both countries have increased their military presences at the border (Bajpaee 2010, para.9), which increases the possibility of a minor dispute in the area escalating into a full scale conflict.

#### Rejection of capitalism causes massive transition wars

Harris 3. Lee, Analyst – Hoover Institution and Author of The Suicide of Reason, “The Intellectual Origins of America-Bashing”, Policy Review, January, http://www.hoover.org/publications/policyreview/3458371.html

This is the immiserization thesis of Marx. And it is central to revolutionary Marxism, since if capitalism produces no widespread misery, then it also produces no fatal internal contradiction: If everyone is getting better off through capitalism, who will dream of struggling to overthrow it? Only genuine misery on the part of the workers would be sufficient to overturn the whole apparatus of the capitalist state, simply because, as Marx insisted, the capitalist class could not be realistically expected to relinquish control of the state apparatus and, with it, the monopoly of force. In this, Marx was absolutely correct. No capitalist society has ever willingly liquidated itself, and it is utopian to think that any ever will. Therefore, in order to achieve the goal of socialism, nothing short of a complete revolution would do; and this means, in point of fact, a full-fledged civil war not just within one society, but across the globe. Without this catastrophic upheaval, capitalism would remain completely in control of the social order and all socialist schemes would be reduced to pipe dreams.

#### Extinction

Nyquist 5. J.R. renowned expert in geopolitics and international relations, WorldNetDaily contributing editor, “The Political Consequences of a Financial Crash,” February 4, www.financialsense.com/stormw...2005/0204.html

Should the United States experience a severe economic contraction during the second term of President Bush, the American people will likely support politicians who advocate further restrictions and controls on our market economy – guaranteeing its strangulation and the steady pauperization of the country. In Congress today, Sen. Edward Kennedy supports nearly all the economic dogmas listed above. It is easy to see, therefore, that the coming economic contraction, due in part to a policy of massive credit expansion, will have serious political consequences for the Republican Party (to the benefit of the Democrats). Furthermore, an economic contraction will encourage the formation of anti-capitalist majorities and a turning away from the free market system. The danger here is not merely economic. The political left openly favors the collapse of America’s strategic position abroad. The withdrawal of the **U**nited **S**tates from the Middle East, the Far East and Europe would catastrophically impact an international system that presently allows 6 billion people to live on the earth’s surface in relative peace.

Should anti-capitalist dogmas overwhelm the global market and trading system that evolved under American leadership, the planet’s economy would contract and untold millions would die of starvation. Nationalistic totalitarianism, fueled by a politics of blame, would once again bring war to Asia and Europe. But this time the war would be waged with mass destruction weapons and the United States would be blamed because it is the center of global capitalism. Furthermore, if the anti-capitalist party gains power in Washington, we can expect to see policies of appeasement and unilateral disarmament enacted. American appeasement and disarmament, in this context, would be an admission of guilt before the court of world opinion. Russia and China, above all, would exploit this admission to justify aggressive wars, invasions and mass destruction attacks. A future financial crash, therefore, must be prevented at all costs.