# 1NC vs Stockdale GS

### 1NC – Off

#### Our interpretation is that the resolution should define the division of affirmative and negative ground and offense. It was *negotiated* and *announced in advance*, providing both sides with a reasonable opportunity to prepare to engage one another’s arguments.

#### ‘Resolved’ preceding a colon indicates a legislative forum.

Blanche Ellsworth 81, English professor at SFSU and M.A. in English from UC Berkeley, 1/1/1981, *English Simplified*, 4th Edition, cc

A colon is also used to separate 3. THE SALUTATION OF A BUSINESS LETTER FROM THE BODY, Dear Sir Dear Ms. Weiner NOTE: In an informal letter, a comma follows the salutation: Dear Mary, Dear Uncle Jack 4. PARTS OF TITLES, REFERENCES, AND NUMERALS. TITLE: Principles of Mathematics: An Introduction REFERENCE: Luke 3:4—13 NUMERALS: 8:15 PM 5. PLACE OF PUBLICATION FROM PUBLISHER Indianapolis: Bobbs-Merrill 6. THE WORD RESOLVED FROM THE STATEMENT OF THE RESOLUTION. Resolved: That this committee go on record as favoring new legislation.

#### Justice implies a desirable departure from the status quo – that means the aff must rectify an unjust social interaction

IHS n.d. [(Institute for Humane Studies at George Mason University, non-profit organization that engages with students and professors) “What is Justice?”] JL

One of the most influential accounts of the origin and nature of justice comes from Plato’s Republic. According to Plato’s account, we can think of the principles of justice as mutually agreed to principles for the coordination and structure of social interaction that would benefit all who are subject to them. What those principles are will depend on the society. In addition, there’s a second theory of justice that Plato offers that’s more general. According to this second theory, justice is “each getting what is rightfully theirs and no one getting what is rightfully another’s.” In other words, questions of justice always ask, “Who has a right to what?”

#### Justice is a policy question

Merriam Webster ND [(Mesrriam Webster) “Justice” https://www.merriam-webster.com/dictionary/justice] BC

Essential Meaning of justice

1: the process or result of using laws to fairly judge and punish crimes and criminals

#### “Appropriation of outer space” by private entities refers to the exercise of exclusive control of space.

TIMOTHY JUSTIN TRAPP, JD Candidate @ UIUC Law, ’13, TAKING UP SPACE BY ANY OTHER MEANS: COMING TO TERMS WITH THE NONAPPROPRIATION ARTICLE OF THE OUTER SPACE TREATY UNIVERSITY OF ILLINOIS LAW REVIEW [Vol. 2013 No. 4]

The issues presented in relation to the nonappropriation article of the Outer Space Treaty should be clear.214 The ITU has, quite blatantly, created something akin to “property interests in outer space.”215 It allows nations to exclude others from their orbital slots, even when the nation is not currently using that slot.216 This is directly in line with at least one definition of outer-space appropriation.217 [\*\*Start Footnote 217\*\*Id. at 236 (“Appropriation of outer space, therefore, is ‘the exercise of exclusive control or exclusive use’ with a sense of permanence, which limits other nations’ access to it.”) (quoting Milton L. Smith, The Role of the ITU in the Development of Space Law, 17 ANNALS AIR & SPACE L. 157, 165 (1992)). \*\*End Footnote 217\*\*]The ITU even allows nations with unused slots to devise them to other entities, creating a market for the property rights set up by this regulation.218 In some aspects, this seems to effect exactly what those signatory nations of the Bogotá Declaration were trying to accomplish, albeit through different means.219

#### Vote negative to preserve limits and equitable division of ground – the resolution is the most predictable stasis point for debates, anything outside of that ruins prep and clash by allowing the affirmative to pick any grounds for debate. That greenlights a race away from the core topic controversies that allow for robust contestation, which favors the aff by making neg ground inapplicable, susceptible to the perm, and concessionary. Two additional impacts:

#### Accessibility – Cutting negs to every possible aff wrecks small schools, which has a disparate impact on under-resourced and minority debaters. Counter-interpretations are arbitrary, unpredictable, and don’t solve the world of neg prep because there’s no grounding in the resolution

#### Link turns their education offense – getting to the third and fourth level of tactical engagement is only possible with refined and well-researched positions connected to the resolutional mechanism. Repeated debates over core issues incentivize innovative argument production and improved advocacy based on feedback and nuanced responses from opponents.

#### Prefer our impact: they’ve skewed the game which necessarily comes first because it makes evaluating the aff impossible. The role of individual debate rounds on broader subject formation is white noise – *can you remember what happened in doubles of the Loyola tournament your junior year?* – individual rounds don’t affect our subjectivity, so fairness is the only impact your ballot can resolve. You should presume all their truth claims false because they have not been properly tested

#### Defend a topical version of the aff – end private appropriation to solve NewSpace’s neoliberal accumulation – i.e. Peninsula’s cosmocapitalism aff – solvency deficits are neg ground and any reason the TVA is bad proves that being negative solves your offense

#### Their argument about statecraft’s grounding in capitalism doesn’t matter – TVA is negative state action that gets rid of things like the 2015 Space Act

#### They can’t get offense: we don’t exclude them, only persuade you that our methodology is best. Every debate requires a winner and loser, so voting negative doesn’t reject them from debate, it just says they should make a better argument next time.

#### At best, they are extra topical – they defend counter-operations in addition to prohibiting space appropriation OR they garner methodological offense about how voting aff can change debate – links to all of our offense because Frankenstein planks circumvent neg ground and explode limits

#### Fairness and education are voters – debate’s a game, and fairness is necessary to determine the winner of the game, and education is the reason why schools fund debate.

#### Drop the debater – dropping the argument doesn’t rectify abuse since winning T proves why we don’t have the burden of rejoinder against their aff.

#### Use competing interps – reasonability invites arbitrary judge intervention since there’s no consensus as to what’s reasonable.

### 1NC – Off

#### CP: I affirm global orbital counter-operations except for those directed against asteroid mining operations.

#### Climate change makes water shortages inevitable – that causes hydro-political conflict escalation which goes nuclear

Jamail 19 [(Dahr, writes for *Truthout* about climate change issues, recipient of the 2008 Martha Gellhorn Prize for Journalism, frequent guest on *Democracy Now!*) “The World Is on the Brink of Widespread Water Wars,” Truth Out, 2/11/2019] JL

Mark’s words should be a call to attention, and a call to action. The plight of farmers in Australia illustrates a larger reality: As planetary temperatures continue to increase and rainfall patterns shift due to human-caused climate disruption, our ability to grow crops and have enough drinking water will become increasingly challenged, and the outlook is only going to worsen.

The most recent United Nations Intergovernmental Panel on Climate Change report warned of increasingly intense droughts and mass water shortages around large swaths of the globe.

But even more conservative organizations have been sounding the alarm. “Water insecurity could multiply the risk of conflict,” warns one of the World Bank’s reports on the issue. “Food price spikes caused by droughts can inflame latent conflicts and drive migration. Where economic growth is impacted by rainfall, episodes of droughts and floods have generated waves of migration and spikes in violence within countries.”

Meanwhile, a study published in the journal Global Environmental Change, looked at how “hydro-political issues” — including tensions and potential conflicts — could play out in countries expected to experience water shortages coupled with high populations and pre-existing geopolitical tensions.

The study warned that these factors could combine to increase the likelihood of water-related tensions — potentially escalating into armed conflict in cross-boundary river basins in places around the world by 74.9 to 95 percent. This means that in some places conflict is practically guaranteed.

These areas include regions situated around primary rivers in Asia and North Africa. Noted rivers include the Tigris and Euphrates, the Indus, the Nile, and the Ganges-Brahmaputra.

Consider the fact that 11 countries share the Nile River basin: Egypt, Burundi, Kenya, Eritrea, Ethiopia, Uganda, Rwanda, Sudan, South Sudan, Tanzania and the Democratic Republic of Congo. All told, more than 300 million people already live in these countries, — a number that is projected to double in the coming decades, while the amount of available water will continue to shrink due to climate change.

For those in the US thinking these potential conflicts will only occur in distant lands — think again. The study also warned of a very high chance of these “hydro-political interactions” in portions of the southwestern US and northern Mexico, around the Colorado River.

Potential tensions are particularly worrisome in India and Pakistan, which are already rivals when it comes to water resources. For now, these two countries have an agreement, albeit a strained one, over the Indus River and the sharing of its water, by way of the 1960 Indus Water Treaty.

However, water claims have been central to their ongoing, burning dispute over the Kashmir region, a flashpoint area there for more than 60 years and counting.

The aforementioned treaty is now more strained than ever, as Pakistan accuses India of limiting its water supply and violating the treaty by placing dams over various rivers that flow from Kashmir into Pakistan.

In fact, a 2018 report from the International Monetary Fund ranked Pakistan third among countries facing severe water shortages. This is largely due to the rapid melting of glaciers in the Himalaya that are the source of much of the water for the Indus.

To provide an idea of how quickly water resources are diminishing in both countries, statistics from Pakistan’s Islamabad Chamber of Commerce and Industry from 2018 show that water availability (per capita in cubic meters per year) shrank from 5,260 in 1951, to 940 in 2015, and are projected to shrink to 860 by just 2025.

In India, the crisis is hardly better. According to that country’s Ministry of Statistics (2016) and the Indian Ministry of Water Resources (2010), the per capita available water in cubic meters per year was 5,177 in 1951, and 1,474 in 2015, and is projected to shrink to 1,341 in 2025.

Both of these countries are nuclear powers. Given the dire projections of water availability as climate change progresses, nightmare scenarios of water wars that could spark nuclear exchanges are now becoming possible.

#### Asteroid mining solves water access – only NEOs are sufficiently proximate and hydrated – independently, storing launch fuel on asteroids reduces space debris – turns case

Tillman 19 [(Nola Taylor, has been published in Astronomy, Sky & Telescope, Scientific American, New Scientist, Science News (AAS), Space.com, and Astrobiology magazine, BA in Astrophysics) “Tons of Water in Asteroids Could Fuel Satellites, Space Exploration,” Space, 9/29/2019] JL

When it comes to mining space for water, the best target may not be the moon: Entrepreneurs' richest options are likely to be asteroids that are larger and closer to Earth.

A recent study suggested that roughly 1,000 water-rich, or hydrated, asteroids near our planet are easier to reach than the lunar surface is. While most of these space rocks are only a few feet in size, more than 25 of them should be large enough to each provide significant water. Altogether, the water locked in these asteroids should be enough to fill somewhere around 320,000 Olympics-size swimming pools — significantly more than the amount of water locked up at the lunar poles, the new research suggested.

Because asteroids are small, they have less gravity than Earth or the moon do, which makes them easier destinations to land on and lift off from. If engineers can figure out how to mine water from these space rocks, they could produce a source of ready fuel in space that would allow spacecraft designers to build refuelable models for the next generation of satellites. Asteroid mining could also fuel human exploration, saving the expense of launching fuel from Earth. In both cases, would-be space-rock miners will need to figure out how to free the water trapped in hydrated minerals on these asteroids.

"Most of the hydrated material in the near-Earth population is contained in the largest few hydrated objects," Andrew Rivkin, an asteroid researcher at Johns Hopkins University Applied Physics Research Laboratory in Maryland, told Space.com. Rivkin is the lead author on the paper, which estimated that near Earth asteroids could contain more easily accessible water than the lunar poles.

According to the United Nations Office for Outer Space Affairs, more than 5,200 of the objects launched into space are still in orbit today. While some continue to function, the bulk of them buzz uselessly over our heads every day. They carry fuel on board, and when they run out, they are either lowered into destructive orbits or left to become space junk, useless debris with the potential to cause enormous problems for working satellites. Refueling satellites in space could change that model, replacing it with long-lived, productive orbiters.

"It's easier to bring fuel from asteroids to geosynchronous orbit than from the surface of the Earth," Rivkin said. "If such a supply line could be established, it could make asteroid mining very profitable."

Hunting for space water from the surface of the Earth is challenging because the planet's atmosphere blocks the wavelength of light where water can be observed. The asteroid warming as it draws closer to the sun can also complicate measurements.

Instead, Rivkin and his colleagues turned to a class of space rocks called Ch asteroids. Although these asteroids don't directly exhibit a watery fingerprint, they carry the telltale signal of oxidized iron seen only on asteroids with signatures of water-rich minerals, which means the authors felt confident assuming that all Ch asteroids carry this rocky water.

Based on meteorite falls, a previous study estimated that Ch asteroids could make up nearly 10% of the near-Earth objects (NEOs). With this information, the researchers determined that there are between 26 and 80 such objects that are hydrated and larger than 0.62 miles (1 km) across.

Right now, only three NEOs have been classified as Ch asteroids, although others have been spotted in the asteroid belt. Most NEOs are discovered and observed at wavelengths too short to reveal the iron band that marks the class. Carbon-rich asteroids, which include Ch asteroids and other flavors, are also darker than the more common stony asteroids, making them more challenging to observe.

Although Ch asteroids definitely contain water-rich minerals, that doesn’t necessarily mean that they will always be the best bet for space mining. It comes down to risk. Would an asteroid-mining company rather visit a smaller asteroid that definitely has a moderate amount of water, or a larger one that could yield a larger payday but could also come up dry?

"Whether getting sure things with no false positives, like the Ch asteroids, is more important or if a greater range of possibilities is acceptable with the understanding that some asteroids will be duds is something the miners will have to decide," Rivkin said.

In addition to estimating the number of large, water-rich asteroids might be available, the study also found that as many as 1,050 smaller objects, roughly 300 feet (100 meters) across, may also linger near Earth. Their small bulk will make them easier to mine because their low gravity will require less fuel to escape from, but they will produce less water overall, and Rivkin expects that the handful of larger space rocks will be the first targets.

"It seems likely that the plan for these companies will be to find the largest accessible asteroid with mineable material with the expectation that it will be more cost-effective than chasing down a large number of smaller objects," Rivkin said. "How 'accessible' and 'mineable material' and 'cost-effective' are defined by each company is to be seen."

### 1NC – Off

**The standard is maximizing expected wellbeing**

1. **Pleasure and pain are intrinsically valuable. People consistently regard pleasure and pain as good reasons for action, despite the fact that pleasure doesn’t seem to be instrumentally valuable for anything.**

**Moen 16** [Ole Martin Moen, Research Fellow in Philosophy at University of Oslo “An Argument for Hedonism” Journal of Value Inquiry (Springer), 50 (2) 2016: 267–281] SJDI

Let us start by observing, empirically, that a widely shared judgment about intrinsic value and disvalue is that pleasure is intrinsically valuable and pain is intrinsically disvaluable. On virtually any proposed list of intrinsic values and disvalues (we will look at some of them below), pleasure is included among the intrinsic values and pain among the intrinsic disvalues**.** This inclusion makes intuitive sense, moreover, for there is something undeniably good about the way pleasure feels and something undeniably bad about the way pain feels, and neither the goodness of pleasure nor the badness of pain seems to be exhausted by the further effects that these experiences might have. “Pleasure” and “pain” are here understood inclusively, as encompassing anything hedonically positive and anything hedonically negative.2 The special value statuses of pleasure and pain are manifested in how we treat these experiences in our everyday reasoning about values**.** If you tell me that you are heading for the convenience store, I might ask: “What for?” This is a reasonable question, for when you go to the convenience store you usually do so, not merely for the sake of going to the convenience store, but for the sake of achieving something further that you deem to be valuable**.** You might answer, for example: “To buy soda.” This answer makes sense, for soda is a nice thing and you can get it at the convenience store. I might further inquire, however: “What is buying the soda good for?” This further question can also be a reasonable one, for it need not be obvious why you want the soda. You might answer: “Well, I want it for the pleasure of drinking it.” If I then proceed by asking “But what is the pleasure of drinking the soda good for?” the discussion is likely to reach an awkward end. The reason is that the pleasure is not good for anything further; it is simply that for which going to the convenience store and buying the soda is good.3 As Aristotle observes**:** “We never ask [a man] what his end is in being pleased, because we assume that pleasure is choice worthy in itself.”4 Presumably, a similar story can be told in the case of pains, for if someone says “This is painful!” we never respond by asking: “And why is that a problem?” We take for granted that if something is painful, we have a sufficient explanation of why it is bad. If we are onto something in our everyday reasoning about values, it seems that pleasure and pain are both places where we reach the end of the line in matters of value.

1. **Moral uncertainty means preventing extinction should be our highest priority.  
   Bostrom 12** [Nick Bostrom. Faculty of Philosophy & Oxford Martin School University of Oxford. “Existential Risk Prevention as Global Priority.” Global Policy (2012)]  
   These reflections on **moral uncertainty suggest** an alternative, complementary way of looking at existential risk; they also suggest a new way of thinking about the ideal of sustainability. Let me elaborate.¶ **Our present understanding of axiology might** well **be confused. We may not** nowknow — at least not in concrete detail — what outcomes would count as a big win for humanity; we might not even yet **be able to imagine the best ends** of our journey. **If we are** indeedprofoundly **uncertain** about our ultimate aims,then we should recognize that **there is a great** option **value in preserving** — and ideally improving — **our ability to recognize value and** to **steer the future accordingly. Ensuring** that **there will be a future** version of **humanity** with great powers and a propensity to use them wisely **is** plausibly **the best way** available to us **to increase the probability that the future will contain** a lot of **value.** To do this, we must prevent any existential catastrophe.
2. **Reducing the risk of extinction is always priority number one.   
   Bostrom 12** [Faculty of Philosophy and Oxford Martin School, University of Oxford.], Existential Risk Prevention as Global Priority.  Forthcoming book (Global Policy). MP. http://www.existenti...org/concept.pdfEven if we use the most conservative of these estimates, which entirely ignores the   possibility of space colonization and software minds, **we find that the expected loss of an existential   catastrophe is greater than the value of 10^16 human lives**.  **This implies that the expected value of   reducing existential risk by a mere one millionth of one percentage point is at least a hundred times the   value of a million human lives.**  The more technologically comprehensive estimate of 10  54 humanbrain-emulation subjective life-years (or 10  52  lives of ordinary length) makes the same point even   more starkly.  Even if we give this allegedly lower bound on the cumulative output potential of a   technologically mature civilization a mere 1% chance of being correct, we find that the expected   value of reducing existential risk by a mere one billionth of one billionth of one percentage point is worth   a hundred billion times as much as a billion human lives. **One might consequently argue that even the tiniest reduction of existential risk has an   expected value greater than that of the definite provision of any ordinary good, such as the direct   benefit of saving 1 billion lives.**  And, further, that the absolute value of the indirect effect of saving 1  billion lives on the total cumulative amount of existential riskâ€”positive or negativeâ€”is almost   certainly larger than the positive value of the direct benefit of such an action.

#### VTL is repugnant – the aff isn’t the arbiter of whether billions of lives have value – there’s an inherent consent DA to voting aff

#### Have a high threshold for util indicts – they have not posited an alternate normative framework and the aff obviously agrees that suffering is bad – more is worse than less, so magnitude is the impact filter

## 1NC – Case

### Solvency

#### No chance “counter-operations” are effective---the NSA cracks down.

Fredrik deBoer 16, Limited-Term Lecturer, Introductory Composition at Purdue Program, 3/15/16, “c’mon, guys,” http://fredrikdeboer.com/2016/03/15/cmon-guys/

I could be wrong about the short-term dangers, and the stakes are incredibly high. But in the end we’re left with the same old question: what tactics will actually work to secure a better world?

In a sharp, sober piece about the meaning of left-wing political violence in the 1970s, Tim Barker writes “If you can’t acknowledge radical violence, radicals are reduced to mere victims of repression, rather than political actors who made definite tactical choices under given political circumstances.” The problem, as Barker goes on to imply, is those tactical choices: in today’s America they will essentially never break on the side of armed opposition against the state. The government knows everything about you, I’m sorry to say, your movements and your associations and the books you read and the things you buy and what you’re saying to the people you communicate with. That’s simply on the level of information, before we even get to the state’s incredible capacity to inflict violence. Look, the world has changed. The relative military capacity of regular people compared to establishment governments has changed, especially in fully developed, technology-enabled countries like the United States. The Czar had his armies, yes, but the Czar’s armies depended on manpower above and beyond everything else. The fighting was still mostly different groups of people with rifles shooting at each other. If tomorrow you could rally as many people as the Bolsheviks had at their revolutionary peak, you’re still left in a world of F-15s, drones, and cluster bombs. And that’s to say nothing of the fact that establishment governments in the developed world can rely on the numbing agents of capitalist luxuries and the American dream to damper revolutionary enthusiasm even among the many millions who have been marginalized and impoverished. This just isn’t 1950s Cuba, guys. It’s just not. In a very real way, modern technology effectively lowers the odds of armed political revolution in a country like the United States to zero, and so much the worse for us. This isn’t fatalism. It doesn’t mean there’s no hope. It means that there is little alternative to organization, to changing minds through committed political action and using the available nonviolent means to create change: a concert of grassroots organizing, labor tactics, and partisan politics. Those things aren’t exactly likely to work, either, but they’re a hell of a lot more plausible than us dweebs taking the Pentagon. Bernie Sanders isn’t really a socialist, but he’s a social democrat that moves the conversation to the left, and if people are dedicated and committed to organizing, the local, state, and national candidates he inspires will move it further to the left still. You got any better suggestions? Listen, commie nerds. My people. I love you guys. I really do. And I want to build a better world. Not incrementally, either, but with the kind of sweeping and transformative change that is required to fix a world of such deep injustice. But seriously: none of us are ever going to take to the barricades. And it’s a good thing, too, because we’d probably find a way to shoot in the wrong direction. I can’t dribble a basketball without falling down. American socialism is largely made up of bookish dreamers. I love those people but they’re not for fighting. And even if you have a particular talent for combat, you’re looking at fighting the combined forces of Google, Goldman Sachs, and the defense industry. Violence is hard. Soldiering is hard. In an era of the NSA and military robots, it’s really, really hard. “Should we condone revolutionary violence?” is dorm room, pass-the-bong conversation fodder, of precisely the moral and intellectual weight of “should we torture a guy if we know there’s a bomb and we know he knows where it is and we know we can stop it if we do?” It’s built on absurd hypotheticals, propped up by the power of anxious machismo, and undertaken to no practical political end. It’s understandable. I get it, I really do. But it’s got nothing to do with us. The only way forward is the grubby, unsexy work of building coalitions and asking people to climb on board.

#### Neolib is sustainable and entrenched – any alternative fails

Adam Arvidsson, Professor of Sociology, University of Milano, ’13

(“Thinking beyond neo-liberalism: A response to Detlev Zwick,” Ephemera, volume 13(2): 407**-412)**

**Today this realistic alternative no longer exists:** actually **existing** **socialism has become insignificant** as a geopolitical player. More importantly, **thirty years of neoliberal governance**, together with the transition to a new global information-intensive regime of capitalist accumulation – ‘communicative capitalism’ perhaps – **has effectively dismantled what was left of the structure and subjectivities that supported this alternative vision**. Traditional working class politics is dead, and the working class itself has been recomposed beyond recognition; people supposedly ‘bowl alone’ and the counter culture has been more or less entirely absorbed within consumer society. We have seen the completion of what Marx described as the process of ‘real subsumption’. Every alternative to capitalism has been included within capitalism and positioned as a potential source of value. As a consequence, life within capitalism has been depoliticized, deprived of an alternative in the name of which a practically effective critique can be mounted. This makes it trickier to do critical theory. **We can** of course **still criticize the actual state of things. We can point to the precarious relations** that prevail among creative knowledge workers; show how exploitative and unjust conditions are intensified by the very forces that drive the globalization of communicative capitalism, like the outsourcing of design work; or lament the fact that a triumphant neoliberal regime subsumes and appropriates aspects of subjectivity and social life that we think should have been left alone. To produce such critiques remains useful intellectual work – I have done it in other contexts (Arvidsson et al., 2010; Arvidsson, 2007), as has Detlev Zwick (2008), and many others. To the extent that such critiques reach a mass audience, they can become a progressive impulse to action and reflection – as in the case of Naomi Klein’s work inspiring the ‘no global’ movement (to use an inadequate name coined by the mainstream press). **But such a critique without an alternative remains unsatisfactory for at least three reasons.** First, and most superficially, **since everyone else is doing it, the marginal utility of yet another piece of critical theory** rapidly diminishes, as does the intellectual satisfaction that can be derived form producing it. Second, and more seriously, **the absence of a realistic alternative**, or even of a historical subject in the name of which such a critique can be pronounced, **risks rendering critical theory moralistic and rather** toothless. We might agree with Zwick when he suggests that the outsourcing of design work from Toronto to the Philippines is somehow wrong, but it is difficult to understand exactly why this would be the case. (Why shouldn’t Philippine designers be allowed to compete with Canadian designers? Can the ‘creative class’ claim an exemption from the global economy? Perhaps the answer is ‘yes’, but I do not know of any viable alternative vision of society that is able to substantiate that ‘yes’.) Third, and most importantly, **in the absence of an alternative vision**, critical **theory remains rather unconvincing to the people in the name of whom it proposes to speak**. I can assure you – and I’ve tried! – **that** **you won’t become an organic intellectual among social entrepreneurs or precarious creative workers by telling them that they are** **exploited, that they sell out their subjectivity, or that the system in which they operate is unjust. Pure critique is simply not attractive enough to make the multitude of new productive subjects,** fragmented by neoliberalism, cohere into a historical subject. To do that you need at least the myth of an alternative, as agitators from Sorel via Lenin to Subcomandante Marcos could tell you. Don’t get me wrong. I am not proposing that it is wrong to point to the precarious conditions of knowledge work, or that we should not do this as academics and researchers. This is still an important task. But it is not enough. Critical theory must do this, but it must also do more. It must also engage with the question of what a realistic alternative to neoliberalism could be, and it must elaborate a realistic political vision in the name of which a critique that is productive and progressive, and not simply moralistic, can be articulated. By realistic, I mean that such an alternative must be sought in the actual relations of production that characterize the contemporary information economy. Zwick’s suggestion that we imagine a commonism of productive consumption as collaborative sharing in the absence of private property and combined with an inclusive model of political determination, collective sovereignty, belonging and justice – and so on – is simply unproductive to my mind. **We might all agree that an economy of commons that has done away with capitalism might be more desirable, but the reality is that hybrid forms, like the game modders** that Zwick cites, **where a an economy of commons co-exists with a capitalist value logic, i**n some form, **are indeed becoming the norm.** At that point the interesting thing to do is not so much to criticize the enduring capitalist nature of these hybrid forms, but rather to investigate the new forms of politics that they might give rise to. This in no way implies that one does away with conflict and politics. Rather, it implies investigating and understanding the new spaces and discourses through which such a new type of politics can be articulated. In order to do this **we must start with what the** actors in**volved in these processes actually think themselves. It is quite useless to simply deploy existing philosophical perspectives, or to compare the reality of communicative capitalism to** utopian projections **of the political visions of last century**. Instead we must start with the ‘empirical metaphysics’, to use Bruno Latour’s term, that actually prevail among people engaged in such hybrid practices. We might all want to do away with neoliberalism and the forms of life that it has promoted. But at the same time, **we all recognize that the neoliberal project has been one of the** most successful projects **of governmentality since, perhaps, the very project of disciplinary power that Foucault himself described**. Rebus sic stantibus we cannot simply wish it away. **We need to recognize that people have changed, that competitive** individualism, **self-branding and an entrepreneurial mentality are, by now, normal features of life. The same thing goes for** the popular political **myths that prevail among advanced knowledge workers**, what Zwick calls ‘cyber-utopianism’. We need to recognize that **notions like peer-to-peer production, high-tech gift economies** and the like have the power to mobilize the energies of the subjects that are most likely to become the pioneers of a new political vision – **today’s version of the skilled workers that have taken the lead in most modern political movements**. Even though the social theory that they produce might be shallow and imperfect, and even though they might not have read Marx and Foucault as well as we have, we cannot simply dismiss this vision as a mere ideology to be replaced by our theoretically more refined ideology. Like the relations of production that are emerging in communicative capitalism and the subjectivity of knowledge workers, these myths are part of the raw material with which the Gramscian intellectual must engage in order to articulate new understandings of common sense that are both politically progressive and intuitively attractive to the people that they are supposed to mobilize. In other words, in order to articulate an alternative, we cannot simply dismiss the reality of communicative capitalism and fall back on what remains of the political utopias of last century. **We need to engage with the reality of neoliberal communicative capitalism** and try to push its dialectic beyond its apolitical present state. We must investigate what the real conditions of production and imagination are and ask ourselves where they might lead. Critical theory needs to become an empirical, and not simply a philosophical, enterprise.

#### No internal link – haven’t explained how debates spill up to the formulation of material networks which their ev says is key

### Theory

#### Their rejection of political engagement is not radical but continues the prevailing mode of leftist cynicism that eviscerates our ability to construct alternatives to political domination

Sam Burgum 15, He has a PhD in Sociology from Warwick. He is now a research fellow at the University of Sheffield, *The branding of the left: between spectacle and passivity in an era of cynicism*, Journal for Cultural Research, 19:3, 306-320, DOI: 10.1080/14797585.2015.1021996//KU-MS

I argue that we can see a similar enacting of interpassivity taking place in the positive response to Brand’s radical spectacle, in particular on social media. For example, following the Paxman interview, Twitter was alight with praise and professions of support, whereas on Facebook, “groups” were quickly established entitled “Russell Brand for Prime Minister” and “I Support Russell Brand’s Call for Revolution” (gaining 150,000 members between them overnight). As such, while his appearance seemed to encourage much discussion, what such media actually allowed for is a subjective expression of intent yet an objective passivity. Brand could be said to have relieved the “keyboard warriors” of their authentic passivity and performed the critique on their behalf, paradoxically rendering his extravagant call for revolution a definite way of preventing it. As Jodi Dean writes, interpassivity is a central part of communicative capitalism’s fantasy of participation, where such internet users

“believe they are active, making a difference by clicking on a button, adding their name to a petition or commenting on a blog” but instead “something else, a fetish object, is active in our stead … the frantic activity of the fetish works to prevent actual action”. (2009, p. 31)

In the same way as Wall-e, Brand’s resistance sits comfortably alongside the preexisting materialisation of neoliberal capitalism as a distribution of the sensible, offering interpassive spectacle and allowing feelings of critique without any objective action.

What the concept of interpassivity ultimately suggests is that, in a cynical society, a gap opens up between objective and subjective belief. What the mechanism allows is a subjective distance – yet an objective proximity – to the problem of change: in action, one enacts passivity; yet in voice, one cries for action. In other words, as Fleming and Spicer have put it, “they are subjectively disbelievers, but objectively (in deeds, actions and behaviours) they ardently believe” (2005, p. 182). As such – and against the Situationist duping spectacle – I argue that the interpassive spectacle is a much better model of contemporary ideology where even practices and discourses of resistance enact that which is being resisted. Therefore, Brand’s entertainment value is problematic, not only because it panders to already-held belief structures, but also because of interpassivity which allows radical expression but actually has the effect of preventing change. The political issue is therefore not false consciousness, but the cynicism of the subject.

Branded by cynicism

Rather than the Situationist spectacle, then, I argue that the reason those on the left are rendered post-politically impotent to bring about change is not because we are deceived, but because we enact apathy despite ourselves. In other words, the relationship between the resistive subject and ideology is not one of false consciousness, but one of cynicism: we are not misdirected by shallow spectacles, but instead somehow distracted by our cynical belief that we are being “distracted”. In this section, I begin by outlining the concept of cynicism as it has been theorised by Peter Sloterdijk and Slavoj Žižek. This then leads us to an analysis of the cynical position adopted by Brand’s critics, which I argue actually demonstrates more political problems on the part of the left than those suggested by Brand himself.

For Sloterdijk, cynicism is an attitude that emerges right at the centre of the enlightenment project, where, in contrast to a modernist illumination of truth, “a twilight arises, a deep ambivalence” (1987, p. 22). Rather than the promised heightened consciousness of science that would allow us to see the hidden essential truths behind appearances, the very conception of truth as unconcealedness (aletheia) 3 instead creates a widespread mistrust and suspicion of every appearance. Subsequently, “a new form of realism bursts forth, a form that is driven by the fear of becoming deceived or overpowered … everything that appears to us could be a deceptive manoeuvre of an overpowering evil enemy” (Sloterdijk, 1987, p. 330). The surface becomes suspect and the subject therefore retreats from all appearances: judging them to be spectacles that are seeking to oppress through falsity. The result is cynicism.

Subsequently, this leads Sloterdijk to his well-known paradoxical definition of cynicism as “enlightened false consciousness” which he describes as a “modernized, unhappy consciousness on which enlightenment has laboured both successfully and in vain … it has learned its lessons in enlightenment, but it has not, probably was not able to, put them into practice” (1987, p. 5). In other words, in the search for a higher consciousness behind appearances, the subject is paradoxically “duped” by their very suspicion of being duped. Furthermore, because the subject thinks they “know” that appearances are just a mask, they disbelieve the truth when it does appear. Like the story of the Emperor’s New Clothes, they fancy themselves to know what is right in front of their eyes (that the emperor is nude and vulnerable) yet they choose “not to know” and don’t act upon it (they still act as if the emperor is all-powerful). As such,

cynical reason is no longer naïve, but is a paradox of enlightened false consciousness: one knows the falsehood very well, one is well aware of a particular hidden interest hidden behind the ideological universality, but still one does not renounce it. (Žižek, 1989, p. 23)

The audience to the parade of power can see that the emperor is not divine – just a fragile human body like the rest of us – yet they cynically choose not to know and objectively retain his aura. They congratulate themselves on “knowing” that Brand is a trivial spectacle, yet they choose to remain apathetic towards his calls for action.

As such, the dismissive reaction to Brand reveals a regressive interpassive tendency of the left to subjectively treat ourselves as “enlightened” to authentic politics and yet objectively render ourselves passive. In a kind of defence mechanism, the left believes that it can avoid becoming the dupe of the latest fashion or advertising trend by treating everything as a matter of fashion and advertising, reassuring ourselves as we flip through television channels or browse through the shopping mall that at least we know what’s really going on. (Stanley, 2007, p. 399)

The critics disbelieve Brand, distrusting his motives and seeing him as inauthentic, yet they continue to “believe” objectively in their own marginalisation. As such, the cynical left believe they are dismissing shallow spectacle in the direction of a stronger authentic radicalism, yet what their “doing believes” is the maintenance of their apathetic position. More precisely, it maintains the attitudes of left melancholy and anti-populism.

The problem of “left melancholy” points towards the forever-delayed search for authenticity on the part of a cynical left that is in mourning. Coined by Walter Benjamin (1998), the concept points towards “the revolutionary who is, finally, attached more to a particular political analysis or ideal – even to the failure of that ideal – than to seizing possibilities for radical change in the present” (Brown, 1999, p. 19). Suffering from a history of defeat and embarrassment, the left persist in a narcissistic identification with failure, fetishising the “good old days” and remaining faithful to lost causes. As Benjamin himself points out, the cynical kernel of this attitude is clear, as “melancholy betrays the world for the sake of knowledge … but in its tenacious selfabsorption it embraces dead objects in its consumption in order to redeem them” (1998, p. 157). In other words, the sentiment is a deliberate self-sabotage that takes place even before politics proper has a chance to begin or “the paradox of an intention to mourn that precedes and anticipates the loss of the object” (Žižek, 2001, p. 146).

This then leads us to the second problem of leftist cynicism: anti-populism. As a result of melancholia, the left has developed the bad habit of prejudging all instances of popular radical expression (such as Brand’s) as necessarily flawed. However, to return to Dean again, she points out that this aversion to being popular and successful is a defining feature of a contemporary left, who prefer to adopt an “authentic” underdog position in advance than take risks towards political power. As she argues, “we” on the left see “ourselves” as “always morally correct but never politically responsible” (Dean, 2009, p. 6) prepositioned as righteous victims and proud political losers from the outset. What this cynicism towards instances of popular radicalism ultimately means, therefore, is that any concern for authenticity is ultimately a regressive one, a defence mechanism for a left that “as long as it sees itself as defeated victims, can refrain from having to admit is short on ideas” (Dean, 2009, p. 5). Such an attitude means never risking potential failure and residing in the safety of marginal righteousness.

It is the contention here, therefore, that both melancholia and anti-populism can be seen in the cynical reaction to Brand’s radicalism. Somewhat ironically, Brand (2013) even recognised these problems himself when he wrote in his New Statesman piece that

the right seeks converts while the left seeks traitors … this moral superiority that is peculiar to the left is a great impediment towards momentum … for an ideology that is defined by inclusiveness, socialism has become in practice quite exclusive.

Automatically, then, the left denounce Brand and self-proclaimed “radical left-wing thinkers and organisers” bitterly complain how he is getting so much attention for the arguments they have been making for years (for example, Park & Nastasia, 2013). The left maintain distance and label Brand trivial, yet such a distance only renders these critiques even more marginal and prevents them from becoming popular, effective or counter-hegemonic.

As Žižek has pointed out, the political issue of cynicism is “not that people ‘do not know what they want’ but rather that cynical resignation prevents them from acting upon it, with the result that a weird gap opens up between what people think and how they act”, adding that “today’s post-political silent majority is not stupid, but it is cynical and resigned” (2011, p. 390). In terms of Brand, this blanket cynical melancholy is typical of the left’s distrust of anything popular, rendering them “like the last men” whose “immediate reaction to idealism is mocking cynicism” (Winlow & Hall, 2012, p. 13). Proponents of a radical alternative immediately adopt caution with the effect of forever delaying change, holding out for that real and authentic (unbranded) struggle and therefore denying it indefinitely.

#### Baudrillard is wrong about the totalizing control of the system over politics

Robinson 13 (Andrew Robinson is a political theorist and activist based in the UK, Jean Baudrillard and Activism: A critique, Feb 7, http://ceasefiremagazine.co.uk/in-theory-baudrillard-14/)

One limit to Baudrillard’s theory is his tendency to over-totalise. Baudrillard is talking about tendential processes, but he often talks as if they are totally effective. There are still, for instance, a lot of uncharted spaces, a lot of unexplained events, a lot of things the system can’t handle. While Baudrillard is describing dominant tendencies in the present, these tendencies coexist with older forms of capitalism, in a situation of uneven development. The persistence of the system’s violence is a problem for Baudrillard’s perspective: the smooth regime of neutralisation and inclusive regulation has not ended older modalities of brutality. At times, Baudrillard exaggerates greatly the extent to which the old authoritarian version of capitalism has been replaced by subtle regimes of control. He exaggerates the extent to which contemporary capitalism is tolerant, permissive and ‘maternal’. This may be because his works were mostly written in France in the 1970s-80s, when the dominant ethos was still largely social-democratic. What Baudrillard recognises as the retrograde version of capitalism associated with the right-wing was to return with a vengeance, especially after 9/11.

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Without an element of border thinking, Baudrillard tends to exaggerate the system’s completeness and effectiveness. Baudrillard assumes that any excess is everywhere absorbed into the code. He ignores the persistence of borderlands. And when he talks about the South, he admits that the old regime of production might still exist here: people still work seeking betterment; colonial wars are fought to destroy persisting symbolic exchange; Saddam was not playing the Gulf War by the rules of deterrence. The Arab masses are still able to become inflamed by war or non-war; Iran and Iraq can still fight a real war, not a simulated non-war. So perhaps only a minority, only the included layers within the North, are trapped within simulation and the ‘masses’. Perhaps reality has not died, but been displaced to the South. It seems, therefore, premature to suggest that the system has encompassed all of social life in the code. To be sure, its reach has expanded, but it has also forcibly delinked large areas of the globe. The penetration of simulated reality into everyday life varies in its effectiveness. At the limit, as in Somalia, simulated states collapse under their own irrelevance. In other cases, an irrelevant state hovers over a largely autonomous society. And the struggle Baudrillard advocated in his early works against subordination as labour-power is not simply theoretical. In fact, there is a constant war, fought at various degrees of intensity, between the system and its others, especially in highly marginal parts of the global South: Chiapas, Afghanistan, the Niger Delta, Somalia, West Papua, rural Colombia, Northeast India, the Andes… The system continues to be drawn into these conflicts, despite its apparent self-deterrence from total nuclear annihilation.

#### Baudrillard is a sexist who advocates for SACRIFICING WOMEN – drop them for reading repugnant scholarship

Brodribb 92 Somer Brodribb 1992 teaches feminist theory/politics and women’s social and political thought at the University of Victoria, British Columbia. She studied in the Feminist focus of the Ontario Institute for Studies in Education, NOTHING MAT(T)ERS: A Feminist Critique of Postmodernism, First published by Spinifex Press)

Jean Baudrillard blames the failure of the “revolution” on women and change, women’s change. He sees puritanical “hysterics” everywhere whom he accuses of exaggeration about sexual abuse (1986, p. 42). The radical nostalgia which pervades his postmodern scribbling is for Rousseau’s (1979) Sophie and Lasch’s haven in a heartless world. For Baudrillard, a rapist is a violent fetus who longs for ancient prohibitions not sexual liberation (1986, p. 47). Baudrillard’s pessimism is actually his hope for a defeat of feminist initiated change and a return to man and god in contract, the eternal sacrifice of woman. His ramblings in his cups of cool whisky (1986, p. 7) are given the status of thought. He considers himself outré and daring to criticize feminists but, as anyone who has taken a feminist position knows, misogynous attack is banal and regular. Sorry, Baudrillard: it is outré to support and to be a feminist. But is this in vino veritas, when Baudrillard proposes a Dionysian sacrifice of woman to the image of beauty, purity, eternity? In Amérique, he writes: “One should always bring something to sacrifice in the desert and offer it as a victim. A woman. If something has to disappear there, something equal in beauty to the desert, why not a woman? (1986, p. 66). When queried about this “gratuitously provocative statement” Baudrillard replied, “Sacrificing a woman in the desert is a logical operation because in the desert one loses one’s identity. It’s a sublime act and part of the drama of the desert. Making a woman the object of the sacrifice is perhaps the greatest compliment I could give her” (Moore: 1989, p. 54). A compliment postmodernism will make over and over, like opera.18 Commenting on a sacrificial scene in D.H.Lawrence’s The Woman Who Rode Away, Millett writes: This is a formula for sexual cannibalism: substitute the knife for the penis and penetration, the cave for a womb, and for a bed, a place of execution—and you provide a murder whereby one acquires one’s victim’s power. Lawrence’s demented fantasy has arranged for the male to penetrate the female with the instrument of death so as to steal her mana... The act here at the centre of the Lawrentian sexual religion is coitus as killing, its central vignette a picture of human sacrifice performed upon the woman to the greater glory and potency of the male (1971, p. 292).

#### 1AC Genovese – inserted in blue – it doesn’t matter whether their evidence was written by Baudrillard himself because their evidence directly cites him and relies on his scholarship

Genovese, T. R. (2017). [The new right stuff: Social imaginaries of outer space and the capitalist accumulation of the cosmos (Doctoral dissertation, Northern Arizona University) Accessed 10/3/2021] CSUF JmB

The discussion of human futures is a difficult topic with which to engage. Within the Western conception of linear time, the future is temporally forward and veiled within statically three-dimensional existence. Therefore, in this chapter, I will turn to some postmodern theorists and philosophers in order to engage with how to situate the role of science fiction, science, and NewSpace within human futures in outer space. This section is also a dreamscape of ideas that may not be fully fleshed out, but are here to generate discussion, hence the heavy reliance on phenomenology. The ideas of hyperreality were first generated by Jean Baudrillard ([1981] 1994) who defined the concept as “the generation by models of a real without origin or reality” (1). Hyperreality is a simulation; an intense blending of “reality” and representation so that there is no longer any clear line wherein one ends and the other begins—and in fact, if one accepts the theory of hyperreality, there is no reality anymore, only simulations of reality, which are unmeasurable because reality and hyperreality are indistinguishable—there’s nothing to measure against the two since reality no longer exists as a separate entity (Baudrillard [1981] 1994). Umberto Eco (1986) expands on Baudrillard’s ideas to suggest that hyperreality is created through a desire for a certain “reality,” and in order to realize that desire, one must fabricate a reality that can be consumed as real. Like Baudrillard before him, Eco (1986) uses Disneyland as an example of hyperreality that manufactures desires that can only be realized within the hyperreality it has created, leading one to wish for the hyperreal rather than nature/the “real.” Eco (1986) illustrates this by saying In this sense, Disneyland not only produces illusion, but—in confessing it— stimulates the desire for it: A real crocodile can be found in the zoo, and as a rule it is dozing or hiding, but Disneyland tells us that faked nature corresponds much more to our daydream demands. When, in the space of twenty-four hours, you go (as I did deliberately) from the fake . . . wild river of Adventureland to a trip on the Mississippi, where the captain of the paddle-wheel steamer says it is possible to see alligators on the banks of the river, and then you don’t see any, you risk feeling homesick for Disneyland, where the wild animals don’t have to be coaxed. Disneyland tells us that technology can give us more reality than nature can. (44) Baudrillard ([1981] 1994) further discusses what happens when science emerges out of science fiction and what happens when the difference between the two is indistinguishable—in other words, the real recedes and all that is left are simulations of the hyperreal and “science fiction in this sense is no longer anywhere, and it is everywhere” (126). In this age of accelerated technoscientific development—as I have argued in previous chapters—science and science fiction are melded into a Baudrillardian simulation where artificial intelligence, autonomous rocket boosters that land on autonomous drone ships, and a constant human presence in outer space is the sedimentation of hyperreality where, as Milburn (2003) has said, “the model becomes indistinguishable from the real, supplants the real, precedes the real, and finally is taken as more real than the real” (267). When the hyperreal meets the hyperobject of the cosmos, a term coined by Timothy Morton (2013) to describe a thing that is “massively distributed in time and space relative to humans” (1), interesting (and confusing) discussions can arise. For the purpose of this thesis, I would like to argue that the nebulous entity of NewSpace— which is multifaceted in that it is philosophical, ideological, and physical in itself—has emerged as a simulacrum from the hyperreality of contemporary space developments. Baudrillard ([1981] 1994) describes a simulacrum as not exactly a copy or imitation of the real, but a thing that becomes a truth in itself—as it has emerged from hyperreality, which is its own truth. I believe Gilles Deleuze (1990) defined simulacra (plural of simulacrum) best when he said: “The copy is an image endowed with resemblance, the simulacrum is an image without resemblance” (257). The overarching colonial romanticism—of a rustic pioneer traveling to a distant land—that is utilized so often by NewSpace plays into similar romanticisms employed by NASA, but instead of the objectives remaining the same, the NewSpace agenda is only concerned with profits. This is why I argue that NewSpace is acting as Saturn devouring his son, simultaneously destroying and emerging as a simulacrum from the 32 hyperreality of cosmic imaginaries. In essence, NewSpace is a copy without an original —feeding off of imaginaries that are simulations and creations of their own devising. The public, in turn, is buying into this vision as if it is the only reality possible. To utilize Eco’s (1986) example above, NewSpace is Adventureland in Disneyland and NASA and other governmental agencies of “OldSpace” are the paddle-boat on the Mississippi. No one wants to wait ten years for a scientific mission when Elon Musk can bring them to Mars in half that time. However, this is not a defense of the “real.” I am a proponent of “utopic thinking,” which in itself is hinged on a dislocation from reality in order to imagine a better world. The tyranny of the so-called real—a term that is often defined by governments and corporations in order to sustain the status-quo (Collins 2008)—is precisely how NewSpace is able to invade the imaginaries of the future so easily. If one is able to dismiss a social justice minded futurologist or science fiction writer with a “Get real!” or “That could never work in reality” then it shuts down entire social theories that resist the established ideology. David Harvey (2000) discusses this in relation to alternatives to capitalism, which fits quite well when discussing the resistance to NewSpace: If the mess seems impossible to change then it is simply because there is indeed “no alternative.” It is the supreme rationality of the market versus the silly irrationality of anything else. And all those institutions that might have helped define some alternatives have other been suppressed or—with some notable exceptions, such as the church—brow-beaten into submission. (154) In the “rationality of the market” all that remains are “degenerate utopias” (Collins 2008; Marin 1993), places like the previously mentioned Disneyland, which presents itself as a utopic place, but is actually shrouding the commercial “reality”—“the Main Street façades are presented to us as toy houses and invite us to enter them, but their interior is always a disguised supermarket, where you buy obsessively, believing that you are still playing” (Eco 1986, 43). According to Eco (1986), Disneyland’s hyperreality begins when one submits to the complete “fakeness” of the simulation in order to bask in the desirous visions of the utopia that it presents. Thus it becomes completely real. I saw this attempt at creating a hyperreality at Spaceport America, with the science fiction inspired door frames and the tour guides dressed in flight suits. Elon Musk presents it to us when he utilizes a four-stage image of Mars, starting with the red planet and ending with a terraformed, Eden-like utopia of oceans and clouds and green forests; a new Earth that beckons to colonizers with new possibilities and untapped markets. This photo is a Debordian “spectacle” that establishes and mediates a social relationship with the public through images (Debord 1994). Photos like the one above are preambles to the spectacle of 1,000 ships departing to Mars every 26 months. Even if that does not become a reality, Musk and other NewSpacers have already begun to creep into the social imaginary of space and supplant their own ideologies as truth into the cosmic hyperreality, which may relate to why my survey results contained foundationally contradictory answers. These photos are part of a larger trend within the space science hyperreality. Messeri (2016) ethnographically uncovers how Martian mapmakers are creating incredibly detailed maps that are created without direct reference to the landscape, since we have never set foot there. Therefore, “the primary goal of today’s [Martian] maps is . . . to establish Mars as inviting to human explorers,” much like the images of a terraformed Mars advertised by SpaceX (Messeri 2016, 74). Like the Jorge Luis Borges short story Del rigor en la ciencia, the map precedes the territory, and the obsession of creating a perfect map makes that map the new reality (as a simulation), while the empire it’s supposed to represent—or in this case, the planet Mars—crumbles away, ceding to the hyperreality of its representation. NASA—in its neoliberal present—is enveloped within this hyperreality as well, perhaps as it recognizes the simulation that NewSpace exists within, and how powerful it can be in the sphere of public relations. However, their production of nostalgia inducing travel posters for places humans have never been are coded to invite—and exclude—certain types of futures (Messeri 2016). Namely, these futures are white, colonial, and evoke vintage 1950s–1960s travel advertisements, a period of U.S. history ripe with inequality and oppression. The political cannot be divorced from aesthetic, no matter how much opponents may try to argue against this point; I’m sorry but Foucault 33 was right. And these theoretical frameworks are the reason why I have argued for social science to take science fiction seriously, especially science fiction that does not espouse the tropes of Spencerian social theory. Science fiction writers who identify as people of color, Indigenous, women, and LGBTQI+—with enough critical mass—can create a simulation and hyperreality with their own work that forces change at the root. The power of words, of worldmaking, of placemaking that is so inherent in science fiction writing are the catalysts for social change, especially in Earth-bound space science. Furthermore, social scientists should not only embrace the political world that science fiction inhabits, but we should be working together as a collective to actively disseminate the social science that good science fiction writers are already conducting. CHAPTER 11: WHAT IS TO BE DONE? This chapter title should really be the title of the entire thesis since it is the question that I have been muttering since the beginning of this research project—except that the title has already been skillfully used by the likes of Nikolai Chernyshevsky, Leo Tolstoy, and Vladimir Lenin. I do not think that my name has quite the prestige to fit in with the company of those gentlemen. So instead, I have decided to make it the name of my final chapter in which I try to discuss how we move forward from the rather bleak present I have divulged in these pages; but I will also throw in some radical tangents in order to keep with the titular theme. As I have argued extensively in this thesis, American imaginaries of the future are dominated by right-libertarianism. NewSpace venture capitalists like Elon Musk and Peter Thiel have latched on to futurist thinking and have the power and capital to begin enacting some of their visions. This is no surprise; engagements with the future emerged as a distinct field of social inquiry during the Cold War when neoliberal capitalism was battling state Communism for supremacy—and the political context has changed very little (Tolon 2012). However, NewSpacers depend on a climate of stress and conflict in order to justify their drastic socio-political-economic actions. For example, Peter Thiel—founder of PayPal, Facebook board member, and heavy investor in SpaceX—has said: “Because there are no truly free places left in our world, I suspect that the mode for escape must involve some sort of new and hitherto untried process that leads us to some undiscovered country; and for this reason I have focused my efforts on new technologies that may create a new space for freedom” (Gittlitz 2016, para. 8). To Thiel, and many of his right-libertarian venture capitalist revolutionary vanguard, these places are threefold: artificial island micro-nations, the Internet and cyber-communities, and outer space (Gittlitz 2016). Thiel has invested in all three of these areas and was recently placed on Trump’s transition team. Soon after Thiel’s appointment, Trump decided to divert NASA funds from climate change studies to deep space exploration. This has a lot to do with the fostering of another American frontier. As of the time of my writing this thesis, Trump has announced plans to build a wall along the United States / Mexico border. These Earthly enclosures are direct manifestations of the cosmic enclosures championed by NewSpace—and often these two proclamations are advocated by the same people in the same positions of power. Is the cosmic frontier doomed to represent the same tragedies and oppression as our Earth frontiers? Not necessarily. And here, I will begin to take a long needed—albeit brief—shift toward optimism. Today, our borderlands are places of violence, where states exert their influence in order to destroy or capitulate the Other—either figuratively or literally. However, this was not always the case. As Durrenberger (2016) has said: [In the past] the borderlands were less foreboding, places the regularizing reach of states had bypassed because they were not worth the effort. To them went those castoffs the states threw off in their great drives to define and unify: prophets, anthropologists, missionaries, and more recently revolutionaries and terrorists. Many who have lived in those areas return with stories of human potential, encouraged by what they have seen of the power of our species’ humanity. (para. 5–6) Could outer space provide a space to unleash the human potential for compassion? With the absolute vastness of the cosmos, it seems impossible—past a certain technoscientific level that I believe we are rapidly approaching—for dominant power systems like states or corporations to garner control over such enormous distances. A certain degree of anarchy—if not full fledged social anarchism or anarchistcommunism—seems to be, in my mind, an inevitability. As I have argued in previous publications, direct democracy within communities outside of the Earth’s influence seems to be the most equitable and efficient way to socially organize in a hostile environment (Genovese 2016d). Haqq-Misra (2015) proposes “liberated settlements” on Mars that reject Earthly authority and operate within their own self-determination. Philosophers, social scientists, and science fiction writers all seem to be contributing socio-political theory to this new “Space Age of Enlightenment.” With the continued generation of liberatory work, we may have a chance at chipping away at NewSpace’s hegemonic lineage of the frontier that I introduced in Chapter 6 and establish a lineage of liberation instead. In fact, I do not think that we have a choice any longer. As of this writing, as I sit behind the abrasive glow of my computer screen at 11:49pm on February 1, 2017, the United States and the world seem to be at a dangerous tipping point. The fascist creep has turned into a fascist sprint, and those that wish to claim neutrality or inaction are implicitly siding with the dominant powers that wish for nothing less than the destruction of the environment for capital gains, a stripping of what little civil protections are left, a mass defunding of all educational systems, a homogenizing of this country utilizing Nazi-era racial order schemes, a villainization of anyone who is not a right, white, Christian man, continued colonial expansion into sovereign Indigenous land while repeatedly breaking treaties, rampant hetero-patriarchy, and the list continues ad nauseam. It is our duty as anthropologists, as social scientists, as science fiction writers, as space enthusiasts, as educators, as human beings to make sure that while we are on Earth, we will fight for the weak, the marginalized, and the disenfranchised by any means necessary and with respect, ears open to the requests of those people who have suffered for years under the boots of oppression, and for whom we may have very little frame of reference in regard to their suffering under structural violence. And as we begin to journey and live away from the only place we have ever called home, we must leave into the cosmos for the right reasons—not for capital, for power, or for narcissistic perceptions of glory, but in the spirit of equity, mutual aid, love, diversity, as well as playful curiosity, and we must do it with soul, with heart, and with joy.

### Turn – Heg

#### Either “counter-operations” don’t do anything – they can’t change overarching structures like US military infrastructure in space, so vote neg on presumption – OR they link to the impact turn

#### US space dominance prevents global war

**Zubrin 15** [(Robert Zubrin, president of Pioneer Energy, a senior fellow with the Center for Security Policy) “US Space Supremacy is Now Critical,” Space News, 1/22/15, https://spacenews.com/op-ed-u-s-space-supremacy-now-critical/] TDI

The United States needs a new national security policy. For the first time in more than 60 years, we face the real possibility of a large-scale conventional war, and we are woefully unprepared. Eastern and Central Europe is now so weakly defended as to virtually invite invasion. The United States is not about to go to nuclear war to defend any foreign country. So deterrence is dead, and, with the German army cut from 12 divisions to three, the British gone from the continent, and American forces down to a 30,000-troop tankless remnant, the only serious and committed ground force that stands between Russia and the Rhine is the Polish army. It’s not enough. Meanwhile, in Asia, the powerful growth of the Chinese economy promises that nation eventual overwhelming numerical force superiority in the region. How can we restore the balance, creating a sufficiently powerful conventional force to deter aggression? It won’t be by matching potential adversaries tank for tank, division for division, replacement for replacement. Rather, the United States must seek to totally outgun them by obtaining a radical technological advantage. This can be done by achieving space supremacy.To grasp the importance of space power, some historical perspective is required. Wars are fought for control of territory. Yet for thousands of years, victory on land has frequently been determined by dominance at sea. In the 20th century, victory on both land and sea almost invariably went to the power that controlled the air. In the 21st century, victory on land, sea or in the air will go to the power that controls space. The critical military importance of space has been obscured by the fact that in the period since the United States has had space assets, all of our wars have been fought against minor powers that we could have defeated without them. Desert Storm has been called the first space war, because the allied forces made extensive use of GPS navigation satellites. However, if they had no such technology at their disposal, the end result would have been just the same. This has given some the impression that space forces are just a frill to real military power — a useful and convenient frill perhaps, but a frill nevertheless. But consider how history might have changed had the Axis of World War II possessed reconnaissance satellites — merely one of many of today’s space-based assets — without the Allies having a matching capability. In that case, the Battle of the Atlantic would have gone to the U-boats, as they would have had infallible intelligence on the location of every convoy. Cut off from oil and other supplies, Britain would have fallen. On the Eastern front, every Soviet tank concentration would have been spotted in advance and wiped out by German air power, as would any surviving British ships or tanks in the Mediterranean and North Africa. In the Pacific, the battle of Midway would have gone very much the other way, as the Japanese would not have wasted their first deadly airstrike on the unsinkable island, but sunk the American carriers instead. With these gone, the remaining cruisers and destroyers in Adm. Frank Jack Fletcher’s fleet would have lacked air cover, and every one of them would have been hunted down and sunk by unopposed and omniscient Japanese air power. With the same certain fate awaiting any American ships that dared venture forth from the West Coast, Hawaii, Australia and New Zealand would then have fallen, and eventually China and India as well. With a monopoly of just one element of space power, the Axis would have won the war. But modern space power involves far more than just reconnaissance satellites. The use of space-based GPS can endow munitions with 100 times greater accuracy, while space-based communications provide an unmatched capability of command and control of forces. Knock out the enemy’s reconnaissance satellites and he is effectively blind. Knock out his comsats and he is deaf. Knock out his navsats and he loses his aim. In any serious future conventional conflict, even between opponents as mismatched as Japan was against the United States — or Poland (with 1,000 tanks) is currently against Russia (with 12,000) — it is space power that will prove decisive. Not only Europe, but the defense of the entire free world hangs upon this matter. For the past 70 years, U.S. Navy carrier task forces have controlled the world’s oceans, first making and then keeping the Pax Americana, which has done so much to secure and advance the human condition over the postwar period. But should there ever be another major conflict, an adversary possessing the ability to locate and target those carriers from space would be able to wipe them out with the push of a button. For this reason, it is imperative that the United States possess space capabilities that are so robust as to not only assure our own ability to operate in and through space, but also be able to comprehensively deny it to others. Space superiority means having better space assets than an opponent. Space supremacy means being able to assert a complete monopoly of such capabilities. The latter is what we must have. If the United States can gain space supremacy, then the capability of any American ally can be multiplied by orders of magnitude, and with the support of the similarly multiplied striking power of our own land- and sea-based air and missile forces be made so formidable as to render any conventional attack unthinkable. On the other hand, should we fail to do so, we will remain so vulnerable as to increasingly invite aggression by ever-more-emboldened revanchist powers. This battle for space supremacy is one we can win. Neither Russia nor China, nor any other potential adversary, can match us in this area if we put our minds to it. We can and must develop ever-more-advanced satellite systems, anti-satellite systems and truly robust space launch and logistics capabilities. Then the next time an aggressor commits an act of war against the United States or a country we are pledged to defend, instead of impotently threatening to limit his tourist visas, we can respond by taking out his satellites, effectively informing him in advance the certainty of defeat should he persist. If we desire peace on Earth, we need to prepare for war in space.

#### Primacy and allied commitments solve arms races and great power war – unipolarity is sustainable, and prevents power vacuums and global escalation

Brands 18 [(Hal, Henry Kissinger Distinguished Professor at Johns Hopkins University's School of Advanced International Studies and a senior fellow at the Center for Strategic and Budgetary Assessments) "American Grand Strategy in the Age of Trump," Page 129-133]

Since World War II, the United States has had a military second to none. Since the Cold War, America has committed to having overwhelming military primacy. The idea, as George W. Bush declared in 2002, that America must possess “strengths beyond challenge” has featured in every major U.S. strategy document for a quarter century; it has also been reflected in concrete terms.6

From the early 1990s, for example, the United States consistently accounted for around 35 to 45 percent of world defense spending and maintained peerless global power-projection capabilities.7 Perhaps more important, U.S. primacy was also unrivaled in key overseas strategic regions—Europe, East Asia, the Middle East. From thrashing Saddam Hussein’s million-man Iraqi military during Operation Desert Storm, to deploying—with impunity—two carrier strike groups off Taiwan during the China-Taiwan crisis of 1995– 96, Washington has been able to project military power superior to anything a regional rival could employ even on its own geopolitical doorstep.

This military dominance has constituted the hard-power backbone of an ambitious global strategy. After the Cold War, U.S. policymakers committed to averting a return to the unstable multipolarity of earlier eras, and to perpetuating the more favorable unipolar order. They committed to building on the successes of the postwar era by further advancing liberal political values and an open international economy, and to suppressing international scourges such as rogue states, nuclear proliferation, and catastrophic terrorism. And because they recognized that military force remained the ultima ratio regum, they understood the centrality of military preponderance.

Washington would need the military power necessary to underwrite worldwide alliance commitments. It would have to preserve substantial overmatch versus any potential great-power rival. It must be able to answer the sharpest challenges to the international system, such as Saddam’s invasion of Kuwait in 1990 or jihadist extremism after 9/11. Finally, because prevailing global norms generally reflect hard-power realities, America would need the superiority to assure that its own values remained ascendant. It was impolitic to say that U.S. strategy and the international order required “strengths beyond challenge,” but it was not at all inaccurate.

American primacy, moreover, was eminently affordable. At the height of the Cold War, the United States spent over 12 percent of GDP on defense. Since the mid-1990s, the number has usually been between 3 and 4 percent.8 In a historically favorable international environment, Washington could enjoy primacy—and its geopolitical fruits—on the cheap.

Yet U.S. strategy also heeded, at least until recently, the fact that there was a limit to how cheaply that primacy could be had. The American military did shrink significantly during the 1990s, but U.S. officials understood that if Washington cut back too far, its primacy would erode to a point where it ceased to deliver its geopolitical benefits. Alliances would lose credibility; the stability of key regions would be eroded; rivals would be emboldened; international crises would go unaddressed. American primacy was thus like a reasonably priced insurance policy. It required nontrivial expenditures, but protected against far costlier outcomes.9 Washington paid its insurance premiums for two decades after the Cold War. But more recently American primacy and strategic solvency have been imperiled.

THE DARKENING HORIZON For most of the post–Cold War era, the international system was— by historical standards—remarkably benign. Dangers existed, and as the terrorist attacks of September 11, 2001, demonstrated, they could manifest with horrific effect. But for two decades after the Soviet collapse, the world was characterized by remarkably low levels of great-power competition, high levels of security in key theaters such as Europe and East Asia, and the comparative weakness of those “rogue” actors—Iran, Iraq, North Korea, al-Qaeda—who most aggressively challenged American power. During the 1990s, some observers even spoke of a “strategic pause,” the idea being that the end of the Cold War had afforded the United States a respite from normal levels of geopolitical danger and competition. Now, however, the strategic horizon is darkening, due to four factors.

First, great-power military competition is back. The world’s two leading authoritarian powers—China and Russia—are seeking regional hegemony, contesting global norms such as nonaggression and freedom of navigation, and developing the military punch to underwrite these ambitions. Notwithstanding severe economic and demographic problems, Russia has conducted a major military modernization emphasizing nuclear weapons, high-end conventional capabilities, and rapid-deployment and special operations forces— and utilized many of these capabilities in conflicts in Ukraine and Syria.10 China, meanwhile, has carried out a buildup of historic proportions, with constant-dollar defense outlays rising from US$26 billion in 1995 to US$226 billion in 2016.11 Ominously, these expenditures have funded development of power-projection and antiaccess/area denial (A2/AD) tools necessary to threaten China’s neighbors and complicate U.S. intervention on their behalf. Washington has grown accustomed to having a generational military lead; Russian and Chinese modernization efforts are now creating a far more competitive environment.

#### China is comparatively less ethical – political and religious repression

Davidson 1/13 [(Helen, news reporter for Guardian Australia based in Taipei) “China in darkest period for human rights since Tiananmen, says rights group,” The Guardian, 1/13/2021] JL

Worsening persecutions of ethnic minorities in Xinjiang, Inner Mongolia and Tibet, targeting of whistleblowers, the crackdown on Hong Kong and attempts to cover up the coronavirus outbreak were all part of the deteriorating situation under President Xi Jinping, the organisation said.

“This has been the darkest period for human rights in China since the 1989 massacre that ended the Tiananmen Square democracy movement,” the report on worldwide human rights abuses said.

“The Chinese government’s authoritarianism was on full display in 2020 as it grappled with the deadly coronavirus outbreak first reported in Wuhan,” the report said, describing the initial cover-up of the outbreak by authorities and the punishment of whistleblower doctors including Li Wenliang and journalists such as Zhang Zhan, who reported on the Wuhan lockdown and on surveillance and harassment of virus victims’ families.

At the same time, “Beijing’s repression – insisting on political loyalty to the Chinese Communist party – deepened across the country”, it said.

“In Xinjiang, Turkic Muslims continue to be arbitrarily detained on the basis of their identity, while others are subjected to forced labour, mass surveillance, and political indoctrination. In Inner Mongolia, protests broke out in September when education authorities decided to replace Mongolian with Mandarin Chinese in a number of classes in the region’s schools.”

And in Tibet, authorities continued “to severely restrict religious freedom, speech, movement and assembly, and fail to redress popular concerns about mining and land grabs by local officials, which often involve intimidation and unlawful use of force by security forces”.

The demand for political loyalty also intensified in the special administrative region of Hong Kong. After more than six months of protests in 2019, Beijing implemented the internationally criticised national security law on the city, outlawing even benign acts of opposition as crimes of secession, sedition, foreign collusion and terrorism. About 90 people have been arrested under the law since June.

Internet censorship, mass surveillance and efforts to “sinicise” religion also deepened across China, the report said. Prominent critics, human rights defenders and journalists were jailed, disappeared or forced into exile, many accused of “inciting subversion” or “picking quarrels and provoking trouble” – a common charged levelled against dissidents and activists.

“Since Xi Jinping came to power the repression has gotten worse and worse overall, in every aspect of Chinese society you can see how the party is becoming more intolerant of any kind of independent activity,” said HRW researcher Yaqiu Wang.

#### US hegemony is key to solve climate change – the Montreal Protocol proves

Bukharin 17 [(Irena, Senior Analyst at C4ADS. She worked in investigating the networks and systems behind transnational forced labor and human rights abuse, formerly investigating global proliferation networks. Public writing includes Safe Harbor, on the role of ports in forced labor in fishing, and Trick of the Trade, on Indian and Pakistani proliferation networks, among others. Analysis cited by National Geographic, Hakai magazine, Reuters, South China Morning Post, IOL, Indonesia Ocean Justice Initiative, and the US Department of Labor.) “Environmental Multilateralism: Climate Change and American Decline” Swarthmore International Relations Journal, Spring 2017] BC

Besides illustrating the conditions necessary for domestic consensus, the Montreal Protocol demonstrates how American hegemony can influence international environmental regime building and how it can preserve American interests for the future. As argued earlier, U.S. leadership is necessary in creating successful international environmental legislation, and the Montreal Protocol was no exception (Ivanova 2008, 59). Because the U.S. emitted the largest amount of ODSs and greenhouse gases, other states would have felt exploited if the U.S. did not participate in ODS regulation (Benedick 1991, 206). Instead, “the US [sic] government set the example by being the first to take regulatory action against the suspect chemicals,” which encouraged other states to participate as well (Benedick 1991, 206). The U.S. went beyond this, however, as they threatened trade restrictions against nations that did not take responsibility for emissions and “made certain that the implications of this threat were not lost on foreign governments, pointing out that there might be a price to pay for not joining in meaningful efforts to protect the ozone layer” (Benedick 1991, 29). The U.S. was able to apply pressure because of the American economy’s “nodal position” that “affords it a unique opportunity to use economic pressure in the pursuit of environmental objectives” (Falkner 2005, 590). Restricting trade with other countries was an asymmetrical threat, as other countries could not individually create the same level of restrictions. In these ways, American hegemony allowed the U.S. to do more to form an international coalition against ozone depletion than any other single nation could have done.

#### China and Russia are worse on human rights than the US

Rogan 18 [(Tom, foreign policy and national security writer for the Washington Examiner, Bachelor of Arts in War Studies from King's College London, a Master of Science in Middle East politics from SOAS, and a Graduate Diploma in Law from the University of Law, London, has previously written for The Washington Post, The Independent, The Atlantic, National Review, the Telegraph, and the Guardian) “China, Russia, and the greater morality of American realism,” Washington Examiner, 12/10/2018] JL

Crucially, however, unlike U.S. influence towards Saudi Arabia on issues like Yemen, neither China or Russia have any interest in influencing Maduro toward a greater morality. On the contrary, Xi and Putin are absolutely happy to see Venezuela's people starve, beg, and prostitute themselves just as long as Maduro does what they want him to do.

What's equally telling is that neither Xi nor Putin attempt to hide their selfish disregard for humanity.

Just last week Putin threw out the red carpet for Maduro as he visited Moscow to beg for investment. And Putin's whole offer of engagement with Saudi Arabia is built on the principle of absolute moral latitude.

In September, Maduro found similar friendliness as he visited China. In neither case did either leader privately or publicly pressure their ally to take greater action to reduce his peoples' grotesque human suffering. Predictably, Putin simply resorted to his worn KGB encyclopedia of trope-tastic un-realities. "We support," Putin told Maduro, "your efforts to achieve mutual understanding in society and all your actions aimed at normalizing relations with the opposition." Putin knows that Maduro's "efforts" have nothing to do with "normalizing relations" and everything to do with smashing the opposition. But Putin also knows his words lend fabric to his propaganda weavers.

Regardless, all the world should pay heed to the divergence between American realism and Sino-Russian realism, because the two doctrines are far from similar. Indeed, their divergence speaks to a multitude of other international realities such as China's concentration camp industry and Pacific Ocean thievery, and Russia's treatment of Syrian lungs, and assassination adventurism. This speaks to a simple truth: Were China or Russia ever to displace the realism of the American-led international order, it would be disastrous for humanity.

### Turn – Space Col

#### 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, “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.

### Turn – Growth

#### Either they don’t solve capitalist exploitation as per 1AC Wilson and Bayon because companies like SpaceX and AliBaba can operate on Earth or they link

#### There’s no explainable impact to the “logic of accumulation” or capitalism in space – there aren’t populations to exploit

#### Growth is sustainable – absolute decoupling

Hausfather 4/6 [(Zeke, climate scientist and energy systems analyst whose research focuses on observational temperature records, climate models, and mitigation technologies, PhD in climate science from the University of California, Berkeley, former research scientist with Berkeley Earth, senior climate analyst at Project Drawdown, and US analyst for Carbon Brief) “Absolute Decoupling of Economic Growth and Emissions in 32 Countries,” Breakthrough Institute, 4/6/2021] JL

The past 30 years have seen immense progress in improving the quality of life for much of humanity. Extreme poverty — the number of people living on less than $1.90 per day — has fallen by nearly two-thirds, from 1.9 billion to around 650 million. Life expectancy has risen in most of the world, along with literacy and access to education, while infant mortality has fallen. Despite perceptions to the contrary, the average person born today is likely to have access to more opportunities and have a better quality of life than at any other point in human history. Much of this increase in human wellbeing has been propelled by rapid economic growth driven largely by state-led industrial policy, particularly in poor-to-middle income countries.

However, this growth has come at a cost: between 1990 and 2019, global emissions of CO2 increased by 56%. Historically, economic growth has been closely linked to increased energy consumption — and increased CO2 emissions in particular — leading some to argue that a more prosperous world is one that necessarily has more impacts on our natural environment and climate. There is a lively academic debate about our ability to “absolutely decouple” emissions and growth — that is, the extent to which the adoption of clean energy technology can allow emissions to decline while economic growth continues.

Over the past 15 years, however, something has begun to change. Rather than a 21st century dominated by coal that energy modelers foresaw, global coal use peaked in 2013 and is now in structural decline. We have succeeded in making clean energy cheap, with solar power and battery storage costs falling 10-fold since 2009. The world produced more electricity from clean energy — solar, wind, hydro, and nuclear — than from coal over the past two years. And, according to some major oil companies, peak oil is upon us — not because we have run out of cheap oil to produce, but because demand is falling and companies expect further decline as consumers increasingly shift to electric vehicles.

The world has long been experiencing a relative decoupling between economic growth and CO2 emissions, with the emissions per unit of GDP falling for the past 60 years. This is the case even in countries like India and China that have been undergoing rapid economic growth. But relative decoupling alone is inadequate in a world where global CO2emissions need to peak and decline in the next decade to give us any chance at limiting warming to well below 2℃, in line with Paris Agreement targets.

Thankfully, there is increasing evidence that the world is on track to absolutely decouple CO2 emissions and economic growth — with global CO2 emissions potentially having peaked in 2019 and unlikely to increase substantially in the coming decade. While an emissions peak is just the first and easiest step towards eventually reaching the net-zero emissions required to stop the world from continuing to warm, it demonstrates that linkages between emissions and economic activity are not an immutable law, but rather simply a result of our current means of energy production.

In recent years we have seen more and more examples of absolute decoupling — economic growth accompanied by falling CO2 emissions. Since 2005, 32 countries with a population of at least one million people have absolutely decoupled

emissions from economic growth, both for terrestrial emissions (those within national borders) and consumption emissions (emissions embodied in the goods consumed in a country). This includes the United States, Japan, Mexico, Germany, United Kingdom, France, Spain, Poland, Romania, Netherlands, Belgium, Portugal, Sweden, Hungary, Belarus, Austria, Bulgaria, El Salvador, Singapore, Denmark, Finland, Slovakia, Norway, Ireland, New Zealand, Croatia, Jamaica, Lithuania, Slovenia, Latvia, Estonia, and Cyprus. Figure 1, below, shows the declines in territorial emissions (blue) and increases in GDP (red).  
To qualify as having experienced absolute decoupling, we require countries included in this analysis to pass four separate filters: a population of at least one million (to focus the analysis on more representative cases), declining territorial emissions over the 2005-2019 period (based on a linear regression), declining consumption emissions, and increasing real GDP (on a purchasing power parity basis, using constant 2017 international $USD). We chose not to include 2020 in this analysis because it is not particularly representative of longer-term trends, and consumption and territorial emissions estimates are not yet available for many countries.

There is a wide range of rates of economic growth between 2005-2019 among countries experiencing absolute decoupling. Somewhat counterintuitively, there is no significant relationship between the rate of economic growth and the magnitude of emissions reductions within the group. While it is unlikely that there is not at least some linkage between the two factors, there are plenty of examples of countries (e.g., Singapore, Romania, and Ireland) experiencing both extremely rapid economic growth and large reductions in CO2 emissions.

One of the primary criticisms of some prior analyses of absolute decoupling is that they ignore leakage. Specifically, the offshoring of manufacturing from high-income countries over the past three decades to countries like China has led to “illusory” drops in emissions, where the emissions associated with high-income country consumption are simply shipped overseas and no longer show up in territorial emissions accounting. There is some truth in this critique, as there was a large increase in emissions embodied in imports from developing countries between 1990 and 2005. After 2005, however, structural changes in China and a growing domestic market led to a reversal of these trends; the amount of emissions “exported” from developed countries to developing countries has actually declined over the past 15 years.

This means that, for many countries, both territorial emissions and consumption emissions (which include any emissions “exported” to other countries) have jointly declined. In fact, on average, consumption emissions have been declining slightly faster than territorial emissions since 2005 in the 32 countries we identify as experiencing absolute decoupling. Figure 2, below, shows the change in consumption emissions (teal) and GDP (red) between 2005 and 2019.  
There is a pretty wide variation in the extent to which these countries have reduced their territorial and consumption emissions since 2005. Some countries — such as the UK, Denmark, Finland, and Singapore – have seen territorial emissions fall faster than consumption emissions, while the US, Japan, Germany, and Spain (among others) have seen consumption emissions fall faster. Figure 3 shows reductions in consumption and territorial emissions for each country, with the size of the dot representing the size of the population in 2019.  
Absolute decoupling is possible. There is no physical law requiring economic growth — and broader increases in human wellbeing — to necessarily be linked to CO2 emissions. All of the services that we rely on today that emit fossil fuels — electricity, transportation, heating, food — can in principle be replaced by near-zero carbon alternatives, though these are more mature in some sectors (electricity, transportation, buildings) than in others (industrial processes, agriculture).

This is not to say that infinite economic growth is desirable (or even possible), particularly given that the global population is expected to start to shrink by the end of the 21st century (and well before that in most currently wealthy countries). There will be some tradeoffs between economic growth and climate mitigation — particularly if the world is to meet ambitious mitigation targets. But it is possible to envision a world that is prosperous, equal, and at net-zero emissions; indeed, all of the future emissions scenarios used by the Intergovernmental Panel on Climate Change (IPCC) do just that.

#### Growth is sustainable and inevitable – unparalleled data proves tech solves, but transition doesn’t.

Bailey ’16 (Ronald; 12/16/16; B.A. in Philosophy and B.A. Economics from the University of Virginia, member of the Society of Environmental Journalists and the American Society for Bioethics and Humanities, citing a compilation of interdisciplinary research; Reason, “Is Economic Growth Environmentally Sustainable?” <http://reason.com/archives/2016/12/16/is-economic-growth-environmentally-sust1)>

Is economic growth environmentally sustainable? No, say a group of prominent ecological economists led by the Australian hydrologist James Ward. In a new PLoS ONE article—"Is Decoupling GDP Growth from Environmental Impact Possible?"—they offer an analysis inspired by the 1972 neo-Malthusian classic The Limits to Growth. They even suggest that The Limits to Growth's projections with regard to population, food production, pollution, and the depletion of nonrenewable resources are still on track. In other words, they think we're still heading for a collapse. I think **they're wrong**. But they're wrong in an instructive way. The authors describe two types of "decoupling," relative and absolute. Relative decoupling means that economic growth increases faster than rates of growth in material and energy **consumption** and **environmental impact**. Between 1990 and 2012, for example, China's **GDP rose 20-fold** while its energy use increased by a factor of four and its material use by a factor of five. Basically this entails increases in efficiency that result in using fewer resources to produce more value. Absolute decoupling is what happens when continued economic growth actually **lessens resource use** and impacts on the natural environment, that is, creating more value while using less stuff. Essentially humanity becomes richer while withdrawing from nature. To demonstrate that continued economic growth is unsustainable, the authors recycle the hoary I=PAT model devised in 1972 by the Stanford entomologist and population alarmist Paul Ehrlich and the Harvard environmental policy professor (and chief Obama science adviser) John Holdren. Human Impact on the environment is supposed to equal to Population x Affluence/consumption x Technology. All of these are presumed to intensify and worsen humanity's impact on the natural world. In Ward and company's updated version of I=PAT, the sustainability of economic growth largely depends on Technology trends. Absolute decoupling from resource consumption or pollutant emissions requires technological intensity of use and emissions to decrease by at least the same annual percentage as the economy is growing. For example, if the economy is growing at three percent per year, technological intensity must reduce 20-fold over 100 years to maintain steady levels of resource consumption or emissions. If technological intensity is faster then resource use and emissions will decline over time, which would result in greater wealth creation with ever lessening resource consumption and environmental spillovers. Once they've set up their I=PAT analysis, Ward and his colleagues assert that "for non-substitutable resources such as land, water, raw materials and energy, we argue that whilst efficiency gains may be possible, there are minimum requirements for these resources that are ultimately governed by physical realities." Among the "physical realities" they mention are limits on plant photosynthesis, the conversion efficiencies of plants into meat, the amount of water needed to grow crops, that all supposedly determine the amount of agricultural land required to feed humanity. They also cite "the upper limits to energy and material efficiencies govern minimum resource throughput required for economic production." To illustrate the operation of their version of the I=PAT equation, they apply it to a recent study that projected it would be possible for Australia's economy to grow 7-fold while simultaneously reducing resource and energy use and lowering environmental pressures through 2050. They **crank the notion** that there are nonsubstitutable physical limits on material and energy resources through their equations until 2100, and they find that eventually consumption of both rise at the same rate as economic growth. QED: Economic growth is unsustainable. Or as they report, "Permanent decoupling (absolute or relative) is impossible for essential, non-substitutable resources because the efficiency gains are ultimately governed by physical limits." **Malthus wins again!** Or does he? GDP growth—increases in the monetary value of all finished goods and services—is a crude measure for improvements in human well-being. Nevertheless, rising incomes (GDP per capita) correlate with lots of good things that nearly everybody wants, including access to more and better **food**, longer and **healthier lives**, more educational **opportunities**, and greater scope for life choices. Ward and his colleagues are clearly right that there is only so much physical stuff on the Earth, but even they know that wealth is not created simply by using more stuff. Where they go wrong (as so many Malthusians do) is by implicitly assuming that there are limits to human creativity. Interestingly, Ward and his colleagues, like Malthus before them, focus on the supposed limits to **agricultural productivity**. For example, they cite the limits to photosynthesis, which will limit the amount of food that humanity can produce. But as they acknowledge, human population may not continue to increase. In fact, **global fertility rates** have been **decelerating** for many decades now, and demographer Wolfgang Lutz calculates that world population will peak after the middle of this century and begin falling. Since the number of mouths to feed will stabilize and people can eat only so much, it is unlikely that the **biophysical limits** of agriculture on Earth will be exceeded. But it gets even better. Agricultural **productivity is improving**. Consider the biophysical limit on photosynthesis cited by the study. In fact, researchers are already making progress on installing more efficient C-4 photosynthesis into rice and wheat, which would **boost yields by** as much as **50 percent**. British researchers just announced that they had figured out how to boost photosynthetic efficiency to create a super-wheat would increase yields by 20 percent. In a 2015 article for the Breakthrough Journal, "The Return of Nature: How Technology Liberates the Environment," Jesse H. Ausubel of Rockefeller University reviews how humanity is **already decoupling** in many ways from the natural world. "A series of 'decouplings' is occurring, so that our economy no longer advances in tandem with exploitation of land, forests, water, and minerals," he writes. "American use of almost everything except information **seems to be peaking**." He notes that agricultural applications of fertilizer and water in the U.S. peaked in the 1980s while yields continued to increase. Thanks to increasing agricultural productivity, humanity is already at **"peak farmland"**; as a result, "an area the size of India or of the United States east of the Mississippi could be released globally from agriculture over the next 50 years or so." Ward is worried about biophysical limits on water use. But as Ausubel notes, U.S. **water use has peaked** and has declined **below the level of 1970**. What about meat? Ausubel notes the **greater efficiency** with which chickens and cultivated fish turn grains and plant matter into meat. In any event, the future of farming is not fields but factories. Innovators are already seeking to replace the entire dairy industry with milk, yogurt, and cheeses made by genetically modified bacteria grown in tanks. Others are figuring how to culture meat in vat. Ausubel also notes that many countries have already been through or are about to enter the "forest transition," in which forests begin to expand. Roger Sedjo, a forest economist at Resources of the Future, has projected that by the middle of this century most of world's **industrial wood** will be produced from planted forests covering a remarkably small land area, perhaps **only 5 to 10 percent** of the extent of today's global forest. Shrinking farms and ranches and expanding forests will do a lot toward turning around the alarming global reduction in wildlife. How about unsubstitutable stuff? Are we running out of that? Ausubel notes that the U.S. has apparently already achieved **absolute decoupling**—call it peak stuff—for a lot of materials, including plastics, paper, timber, phosphate, aluminum, steel, and copper. And he reports relative decoupling for **53** other **commodities**, all of which are likely heading toward absolute decoupling. Additive manufacturing is also known as 3-D printing, in which machines build up new items one layer at a time. The Advanced Manufacturing Office suggested that additive manufacturing can reduce material needs and costs by up to **90 percent**. And instead of the replacement of worn-out items, their material can **simply be recycled** through a printer to return it to good-as-new condition using only 2 to 25 percent of the energy required to make new parts. 3-D printing on demand will also eliminate storage and inventory costs, and will significantly cut transportation costs. Nanomanufacturing—building atom-by-atom—will likely engender a **fourth industrial revolution** by spurring exponential economic growth while reducing human demands for material resources. Ward and company project that Australians will be using 250 percent more energy by 2100. Is there an upper limit to energy production that implies unsustainability? In their analysis, the ecological economists apparently assume that energy supplies are limited. Why this is not clear, unless their model **implicitly assumes** a growing **consumption** of fossil fuels (and even then, the world is not close to running out of those). But there is a source of energy that, for all practical purposes, is limitless and has few deleterious environmental effects: **nuclear power**. If demand for primary energy were to double by 2050, a back-of-the-envelope calculation finds that the **entire world's energy needs** could be supplied by 6,000 conventional nuclear power plants. The deployment of fast reactors would supply "renewable" energy for thousands of years. The development of thorium reactors could also supply **thousands of years** of energy. And both could do so without harming the environment. (Waste heat at that scale would not be much of a problem.) Such power sources are in any relevant sense "decoupled" from the natural world, since their fuel cycles produce **little pollution**. Recall that GDP measures the monetary value of all finished goods and services. Finished goods will become a shrinking part of the world's economy as more people gain access to food, clothing, housing, transportation, and so forth. Already, services account for 80 percent of U.S. GDP and 80 percent of civilian employment. Instead of stuff, people will want to spend time creating and enjoying themselves. As technological progress enables economic growth, people will consume more pixels and less petroleum, more massages and less mortar, more handicrafts and less hardwood. Ultimately, Ward and his colleagues make the **same mistake as Malthus** and the Limits to Growth folks: They **extrapolate trends** without taking adequate account of human **ingenuity**. Will it be possible to grow the economy 7-fold over this century while reducing resource consumption and restoring the natural world? Yes.

#### Their cap solves warming cards are misguided— growth initially hurts the environment but is needed to clean it up.

Bailey 19 [(Ronald, the science correspondent for Reason and the author of the books The End of Doom: Environmental Renewal in the Twenty-first Century (July 2015) and Liberation Biology: The Moral and Scientific Case for the Biotech Revolution (Prometheus, 2005). His work was featured in The Best American Science and Nature Writing 2004.) “Capitalism Is the Key to Fixing Climate Change,” Reason, 9/20/19. <https://reason.com/2019/09/20/capitalism-is-the-key-to-fixing-climate-change/>] RR

Today's Climate Strike protests are supposed to bring attention to the science showing that human-made global warming is becoming a problem. Fair enough. But some participants see climate change as pretext for destroying a market system that they have always hated.

Naomi Klein made this point crystal clear in her 2014 book, This Changes Everything: Capitalism vs. the Climate. Speaking with New York magazine this week, Klein claimed that "taking climate change seriously decimates the entire neoliberal project because you can't have a laissez-faire attitude, where it's having your emissions in 11 years; you actually need to regulate your way out of it. And yeah, you can have a few market mechanisms in place, but the market is not going to do it for you."

The science, insists Klein, "says our future is radical. The present is pretty radical too. The idea that there is some sort of gradual, incremental, let's-split-the-difference pathway to respond to this crisis is silly at this point."

A headline in The Guardian put it even more forthrightly: "Ending climate change requires ending capitalism."

Global warming is a classic example of what happens in an open-access commons. The atmosphere is unowned, so no one has an incentive to protect and conserve it. Instead, people overexploit and pollute it. Historically this happened with sulfur dioxide, carbon monoxide, and smoke. In the United States, cities initially implemented regulations to cut back on noxious air pollutants. (For example, the first smoke abatement regulations were enacted by Chicago and Cincinnati in 1881.) Eventually federal regulations and market mechanisms were adopted. As a result, since 1980 air pollutants have collectively declined by 68 percent while the economy grew by 175 percent.

Scientists call this the environmental Kuznets curve. Environmental commons tend to deteriorate as countries begin to develop economically—but once per-capita income reaches a certain level, the public starts to demand a cleanup. It's a U-shaped pattern: Economic growth initially hurts the environment, but after a point it makes things cleaner. By then, slowing or stopping economic growth will delay environmental improvement, including efforts to mitigate the problem of man-made global warming.

The MIT economist Andrew McAfee explains the process in a forthcoming book, More from Less:

We have finally learned how to tread more lightly on our planet….In America—a large rich country that accounts for about 25 percent of the global economy—we're now generally using less for most resources year after year, even as our economy and population continue to grow. What's more, we're also polluting the air and water less, emitting fewer greenhouse gases, and seeing population increases in many animals that had almost vanished. America, in short, is post-peak in its exploitation of the earth. The situation is similar in many other rich countries, and even developing countries such as China are now taking better care of the planet in important ways.

How did this happen? Through more capitalism, not less:

The strangest aspect of the story is that we didn't make any radical course changes to eliminate the trade-off between human prosperity and planetary health. Instead, we just got a lot better at doing things we'd already been doing. In particular, we got better at combining technological progress with capitalism to satisfy human wants and needs.

McAfee's book documents how technological progress spurred by market competition is dematerializing the economy. McAfee makes a strong case that climate change is an open-access commons problem that markets can dematerialize once a price is put on greenhouse gas emissions.

#### Key to solve disease.

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.

#### Extinction – defense is wrong

Piers Millett 17, Consultant for the World Health Organization, PhD in International Relations and Affairs, University of Bradford, Andrew Snyder-Beattie, “Existential Risk and Cost-Effective Biosecurity”, Health Security, Vol 15(4), http://online.liebertpub.com/doi/pdfplus/10.1089/hs.2017.0028

Historically, disease events have been responsible for the greatest death tolls on humanity. The 1918 flu was responsible for more than 50 million deaths,1 while smallpox killed perhaps 10 times that many in the 20th century alone.2 The Black Death was responsible for killing over 25% of the European population,3 while other pandemics, such as the plague of Justinian, are thought to have killed 25 million in the 6th century—constituting over 10% of the world’s population at the time.4 It is an open question whether a future pandemic could result in outright human extinction or the irreversible collapse of civilization.

A skeptic would have many good reasons to think that existential risk from disease is unlikely. Such a disease would need to spread worldwide to remote populations, overcome rare genetic resistances, and evade detection, cures, and countermeasures. Even evolution itself may work in humanity’s favor: Virulence and transmission is often a trade-off, and so evolutionary pressures could push against maximally lethal wild-type pathogens.5,6

While these arguments point to a very small risk of human extinction, they do not rule the possibility out entirely. Although rare, there are recorded instances of species going extinct due to disease—primarily in amphibians, but also in 1 mammalian species of rat on Christmas Island.7,8 There are also historical examples of large human populations being almost entirely wiped out by disease, especially when multiple diseases were simultaneously introduced into a population without immunity. The most striking examples of total population collapse include native American tribes exposed to European diseases, such as the Massachusett (86% loss of population), Quiripi-Unquachog (95% loss of population), and theWestern Abenaki (which suffered a staggering 98% loss of population).

In the modern context, no single disease currently exists that combines the worst-case levels of transmissibility, lethality, resistance to countermeasures, and global reach. But many diseases are proof of principle that each worst-case attribute can be realized independently. For example, some diseases exhibit nearly a 100% case fatality ratio in the absence of treatment, such as rabies or septicemic plague. Other diseases have a track record of spreading to virtually every human community worldwide, such as the 1918 flu,10 and seroprevalence studies indicate that other pathogens, such as chickenpox and HSV-1, can successfully reach over 95% of a population.11,12 Under optimal virulence theory, natural evolution would be an unlikely source for pathogens with the highest possible levels of transmissibility, virulence, and global reach. But advances in biotechnology might allow the creation of diseases that combine such traits. Recent controversy has already emerged over a number of scientific experiments that resulted in viruses with enhanced transmissibility, lethality, and/or the ability to overcome therapeutics.13-17 Other experiments demonstrated that mousepox could be modified to have a 100% case fatality rate and render a vaccine ineffective.18 In addition to transmissibility and lethality, studies have shown that other disease traits, such as incubation time, environmental survival, and available vectors, could be modified as well.19-2