### Util Framework

#### The standard is maximizing expected well-being.

#### Science proves non util ethics are impossible

**Greene 10** – Joshua, Associate Professor of Social science in the Department of Psychology at Harvard University

(The Secret Joke of Kant’s Soul published in Moral Psychology: Historical and Contemporary Readings, accessed: www.fed.cuhk.edu.hk/~lchang/material/Evolutionary/Developmental/Greene-KantSoul.pdf)

**What turn-of-the-millennium science** **is telling us is that human moral judgment is not a pristine rational enterprise**, that our **moral judgments are driven by a hodgepodge of emotional dispositions, which themselves were shaped by a hodgepodge of evolutionary forces, both biological and cultural**. **Because of this, it is exceedingly unlikely that there is any rationally coherent normative moral theory that can accommodate our moral intuitions**. Moreover, **anyone who claims to have such a theory**, or even part of one, **almost certainly doesn't**. Instead, what that person probably has is a moral rationalization. It seems then, that we have somehow crossed the infamous "is"-"ought" divide. How did this happen? Didn't Hume (Hume, 1978) and Moore (Moore, 1966) warn us against trying to derive an "ought" from and "is?" How did we go from descriptive scientific theories concerning moral psychology to skepticism about a whole class of normative moral theories? The answer is that we did not, as Hume and Moore anticipated, attempt to derive an "ought" from and "is." That is, our method has been inductive rather than deductive. We have inferred on the basis of the available evidence that the phenomenon of rationalist deontological philosophy is best explained as a rationalization of evolved emotional intuition (Harman, 1977). Missing the Deontological Point I suspect that **rationalist deontologists will remain unmoved by the arguments presented here**. Instead, I suspect, **they** **will insist that I have simply misunderstood what** Kant and like-minded **deontologists are all about**. **Deontology, they will say, isn't about this intuition or that intuition**. It's not defined by its normative differences with consequentialism. **Rather, deontology is about taking humanity seriously**. Above all else, it's about respect for persons. It's about treating others as fellow rational creatures rather than as mere objects, about acting for reasons rational beings can share. And so on (Korsgaard, 1996a; Korsgaard, 1996b). **This is, no doubt, how many deontologists see deontology. But this insider's view**, as I've suggested, **may be misleading**. **The problem**, more specifically, **is that it defines deontology in terms of values that are not distinctively deontological**, though they may appear to be from the inside. **Consider the following analogy with religion. When one asks a religious person to explain the essence of his religion, one often gets an answer like this: "It's about love**, really. It's about looking out for other people, looking beyond oneself. It's about community, being part of something larger than oneself." **This sort of answer accurately captures the phenomenology of many people's religion, but it's nevertheless inadequate for distinguishing religion from other things**. This is because many, if not most, non-religious people aspire to love deeply, look out for other people, avoid self-absorption, have a sense of a community, and be connected to things larger than themselves. In other words, secular humanists and atheists can assent to most of what many religious people think religion is all about. From a secular humanist's point of view, in contrast, what's distinctive about religion is its commitment to the existence of supernatural entities as well as formal religious institutions and doctrines. And they're right. These things really do distinguish religious from non-religious practices, though they may appear to be secondary to many people operating from within a religious point of view. In the same way, I believe that most of **the standard deontological/Kantian self-characterizatons fail to distinguish deontology from other approaches to ethics**. (See also Kagan (Kagan, 1997, pp. 70-78.) on the difficulty of defining deontology.) It seems to me that **consequentialists**, as much as anyone else, **have respect for persons**, **are against treating people as mere objects,** **wish to act for reasons that rational creatures can share, etc**. **A consequentialist respects other persons, and refrains from treating them as mere objects, by counting every person's well-being in the decision-making process**. **Likewise, a consequentialist attempts to act according to reasons that rational creatures can share by acting according to principles that give equal weight to everyone's interests, i.e. that are impartial**. This is not to say that consequentialists and deontologists don't differ. They do. It's just that the real differences may not be what deontologists often take them to be. What, then, distinguishes deontology from other kinds of moral thought? A good strategy for answering this question is to start with concrete disagreements between deontologists and others (such as consequentialists) and then work backward in search of deeper principles. This is what I've attempted to do with the trolley and footbridge cases, and other instances in which deontologists and consequentialists disagree. **If you ask a deontologically-minded person why it's wrong to push someone in front of speeding trolley in order to save five others, you will get** characteristically deontological **answers**. Some **will be tautological**: **"Because it's murder!"** **Others will be more sophisticated: "The ends don't justify the means**." "You have to respect people's rights." **But**, as we know, **these answers don't really explain anything**, because **if you give the same people** (on different occasions) **the trolley case** or the loop case (See above), **they'll make the opposite judgment**, even though their initial explanation concerning the footbridge case applies equally well to one or both of these cases. **Talk about rights, respect for persons, and reasons we can share are natural attempts to explain, in "cognitive" terms, what we feel when we find ourselves having emotionally driven intuitions that are odds with the cold calculus of consequentialism**. Although these explanations are inevitably incomplete, **there seems to be "something deeply right" about them because they give voice to powerful moral emotions**. **But, as with many religious people's accounts of what's essential to religion, they don't really explain what's distinctive about the philosophy in question**.

#### Uncertainty and social contract require governments use util

**Goodin, 1995  (**Robert, philsopher at the Research School of the Social Sciences, Utilitarianism as Public Philosophy. P. 62-63)

Consider, first, the argument from necessity.  Public officials are obliged to make their choices under uncertainty, and uncertainty of a very special sort at that.  All choices—public and private alike—are made under some degree of uncertainty, of course.  But in the nature of things, private individuals will usually have more complete information on the peculiarities of their own circumstances and on the ramifications that alternative possible choices might have on them.  Public officials, in contrast, are relatively poorly informed as to the effects that their choices will have on individuals, one by one.  What they typically do know are generalities: averages and aggregates.  They know what will happen most often to most people as a result of their various possible choices.  But that is all.  That is enough to allow public policy-makers to use the utilitarian calculus—if they want to use it at all—to choose general rules of conduct.  Knowing aggregates and averages, they can proceed to calculate the utility payoffs from adopting each alternative possible general rules.

#### Reducing existential risks is the top priority in any coherent moral theory

**Pummer 15**

(Theron, Philosophy @St. Andrews http://blog.practicalethics.ox.ac.uk/2015/05/moral-agreement-on-saving-the-world/)

There appears to be lot of disagreement in moral philosophy. Whether these many apparent disagreements are deep and irresolvable, I believe there is at least one thing it is reasonable to agree on right now, **whatever** general **moral view we adopt**: that it is very important to reduce the risk that all intelligent beings on this planet are eliminated by an enormous **catastrophe**, such as a nuclear war. How we might in fact try to reduce such existential risks is discussed elsewhere. My claim here is only that we – whether we’re consequentialists, deontologists, or virtue ethicists – should all agree that we should try **to save the world.** According to consequentialism, we should maximize the good, where this is taken to be the goodness, from an impartial perspective, of outcomes. Clearly one thing that makes an outcome good is that the people in it are doing well. There is little disagreement here. If the happiness or well-being of possible future people is just as important as that of people who already exist, and if they would have good lives, it is not hard to see how reducing existential risk is easily the most important thing in the whole world. This is for the familiar reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. There are so many possible future people that reducing existential risk is arguably the most important thing in the world, even if the well-being of these possible people were given only 0.001% as much weight as that of existing people. Even on a wholly person-affecting view – according to which there’s nothing (apart from effects on existing people) to be said in favor of creating happy people – the case for reducing existential risk is very strong. As noted in this seminal paper, this case is strengthened by the fact that there’s a good chance that many existing people will, with the aid of life-extension technology, live very long and very high quality lives. You might think what I have just argued applies to consequentialists only. There is a tendency to assume that, if an argument appeals to consequentialist considerations (the goodness of outcomes), **it is irrelevant to non-consequentialists**. **But that is a huge mistake**. Non-consequentialism is the view that there’s more that determines rightness than the goodness of consequences or outcomes; **it is not the view that the latter don’t matter**. Even John **Rawls wrote, “All ethical doctrines worth our attention take consequences into account** in judging rightness. One which did not would simply be irrational, crazy.” **Minimally plausible versions of deontology and virtue ethics must be concerned in part with promoting the good, from an impartial point of view**. They’d thus imply **very strong reasons** to reduce existential risk, at least when this doesn’t significantly involve doing harm to others or damaging one’s character. What’s even more surprising, perhaps, is that even if our own good (or that of those near and dear to us) has much greater weight than goodness from the impartial “point of view of the universe,” indeed even if the latter is entirely morally irrelevant, we may nonetheless have very strong reasons to reduce existential risk. Even egoism, the view that each agent should maximize her own good, might imply strong reasons to reduce existential risk. It will depend, among other things, on what one’s own good consists in. If well-being consisted in pleasure only, it is somewhat harder to argue that egoism would imply strong reasons to reduce existential risk – perhaps we could argue that one would maximize her expected hedonic well-being by funding life extension technology or by having herself cryogenically frozen at the time of her bodily death as well as giving money to reduce existential risk (so that there is a world for her to live in!). I am not sure, however, how strong the reasons to do this would be. But views which imply that, if I don’t care about other people, I have no or very little reason to help them are not even minimally plausible views (in addition to hedonistic egoism, I here have in mind views that imply that one has no reason to perform an act unless one actually desires to do that act). To be minimally plausible, egoism will need to be paired with a more sophisticated account of well-being. To see this, it is enough to consider, as Plato did, the possibility of a ring of invisibility – suppose that, while wearing it, Ayn could derive some pleasure by helping the poor, but instead could derive just a bit more by severely harming them. Hedonistic egoism would absurdly imply she should do the latter. To avoid this implication, egoists would need to build something like the meaningfulness of a life into well-being, in some robust way, where this would to a significant extent be a function of other-regarding concerns (see chapter 12 of this classic intro to ethics). But once these elements are included, we can (roughly, as above) argue that this sort of egoism will imply strong reasons to reduce existential risk. Add to all of this Samuel Scheffler’s recent intriguing arguments (quick podcast version available here) that **most of what makes our lives go well would be undermined if there were no future generations** of intelligent persons. On his view, my life would contain vastly less well-being if (say) a year after my death the world came to an end. So obviously if Scheffler were right I’d have very strong reason to reduce existential risk. **We should also take into account moral uncertainty.** What is it reasonable for one to do, when one is uncertain not (only) about the empirical facts, but also about the moral facts? I’ve just argued that there’s agreement among minimally plausible ethical views that we have strong reason to reduce existential risk – not only consequentialists, but also deontologists, virtue ethicists, and sophisticated egoists should agree. But even those (hedonistic egoists) **who disagree should have a significant level of confidence that they are mistaken,** and that one of the above views is correct. Even if they were 90% sure that their view is the correct one (and 10% sure that one of these other ones is correct), **they would have pretty strong reason, from the standpoint of moral uncertainty, to reduce existential risk**. Perhaps most disturbingly still, even if we are only 1% sure that the well-being of possible future people matters, it is at least arguable that, from the standpoint of moral uncertainty, **reducing existential risk is the most important thing in the world**. Again, this is largely for the reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. (For more on this and other related issues, see this excellent dissertation). Of course, it is uncertain whether these untold trillions would, in general, have good lives. It’s possible they’ll be miserable. It is enough for my claim that there is moral agreement in the relevant sense if, at least given certain empirical claims about what future lives would most likely be like, all minimally plausible moral views would converge on the conclusion that we should try to save the world. While there are some non-crazy views that place significantly greater moral weight on avoiding suffering than on promoting happiness, for reasons others have offered (and for independent reasons I won’t get into here unless requested to), they nonetheless seem to be fairly implausible views. And even if things did not go well for our ancestors, I am optimistic that they will overall go fantastically well for our descendants, if we allow them to. I suspect that most of us alive today – at least those of us not suffering from extreme illness or poverty – have lives that are well worth living, and that things will continue to improve. Derek Parfit, whose work has emphasized future generations as well as agreement in ethics, described our situation clearly and accurately: “We live during the hinge of history. Given the scientific and technological discoveries of the last two centuries, the world has never changed as fast. We shall soon have even greater powers to transform, not only our surroundings, but ourselves and our successors. If we act wisely in the next few centuries, humanity will survive its most dangerous and decisive period. Our descendants could, if necessary, go elsewhere, spreading through this galaxy…. Our descendants might, I believe, make the further future very good. But that good future may also depend in part on us. If our selfish recklessness ends human history, we would be acting very wrongly.” (From chapter 36 of On What Matters)

#### Predictions are possible and useful

**Mearsheimer, 01**  (John, professor of political science at the University of Chicago, The Tragedy of Great Power Politics, 2001  p. 8, googleprint)

As a result, all political forecasting is bound to include some error. Those who venture to predict, as I do here, should therefore proceed with humility, take care not to exhibit unwarranted confidence, and admit that hindsight is likely to reveal surprises and mistakes. Despite these hazards, social scientists should nevertheless use their theories to make predictions about the future. Making predictions helps inform policy discourse, because it helps make sense of events unfolding in the world around us. And by clarifying points of disagreement, making explicit forecasts helps those with contradictory views to frame their own ideas more clearly. Furthermore, trying to anticipate new events is a good way to test social science theories, because theorists do not have the benefit of hindsight and therefore cannot adjust their claims to fit the evidence (because it is not yet available). In short, the world can be used as a laboratory to decide which theories best explain international politics. In that spirit I employ offensive realism to peer into the future, mindful of both the benefits and the hazards of trying to predict events.

### Regulations CP

#### Counterplan: States should create and adopt a new set of flexible regulations concerning responsible space colonization through the UN Office of Outer Space Affairs, focused on issues of governance of space colonies and potential existential risks, including but not limited to revising treaties to allow for private outer space appropriation with taxation paid to the United Nations to be used for redistributive efforts.

#### Current government issues to resolve colony governance are insufficient – as is the OST – but new flexible regulations solve

Kovic 21 Kovic, Marko. PhD Communication and Media Studies, University of Zurich. "Risks of space colonization." Futures 126 (2021): 102638. [Quality Control]

Overall, it seems fair to say that space governance is in shambles today. Creating any kind of meaningful space colonization-related governance in such a policy and policymaking environment is difficult, to say the least. We should not expect governance work on space colonization be initiated by gov-ernmental actors any time soon, so the proverbial ball is, at the time being,probably in the academic court. If we were to draft a space colonization gov-ernance framework that would be effective at mitigating colonization-relatedrisks and maximize the positive future value, what are some factors or aspects that need to be taken into account? First, we should consider a break with the past. Existing space gover-nance based on the Outer Space Treaty has barely seen any progress over the decades, and the Outer Space Treaty does not seem geared towards questions of space colonization risks. Starting with a philosophical clean slate that is divorced from the realities of the 1960-ies is probably the easiest way forward. Second, given the uncertainty of the long-term future, a governance frame-work for space colonization should be conceptualized as provisional and mal-leable. Major principles of safe space colonization might very well be uni-versal, but the empirical realities on the ground might change in the nottoo distant future. This means that, on one hand, our understanding of space colonization-related risks will almost certainly change over time. The practical reality of policymaking on Earth, on the other hand, will probably also undergo significant changes in the future. The current political order on Earth has been, roughly speaking, stable since the Second World War, and it seems plausible to expect the global political order to roughly continue along those lines for several more decades. This means that any governance frame-work that is geared towards today’s workings of global policymaking should daim to achieve tangible results as soon as possible, before the world changesso much that the governance framework and its bodies simply become obso-lete. The philosophical timescale of such a governance project thousands tomillions of years, but the practical timescale for achieving results should be decades.

#### Those specific reforms are necessary to encourage space colonization and humanitarian economics– but avoids all terrestrial downsides

Iliopoulos and Esteban 20 Iliopoulos, Nikolaos [University of Tokyo], and Miguel Esteban [Waseda University]. "Sustainable space exploration and its relevance to the privatization of space ventures." Acta Astronautica 167 (2020): 85-92. [Quality Control]

The envisioned legal regime to encourage private firms to undertake the high risk and high cost involved in activities of space exploration would have to explicitly recognize extra-terrestrial property claims of individuals and corporations that meet specified conditions. As such, based on the conclusions made through this paper ,it is considered that with the right negotiation terms, the current treaties can be revised so as to become steppingstones for the advancement of space exploration that could potentially bring forth significant changes to the environment surrounding planet Earth. Finally, one way that such privatization efforts could be seen to benefit of mankind as a whole is that any taxation resulting from it should be paid directly to the United Nations, or that at least some fraction of the profits should fund this organization.

### NC – ! – Inequality

#### Redistributive economic policy by international institutions solves income inequality

Qureshi 20 Qureshi, Zia, visiting fellow in the Global Economy and Development program at the Brookings Institution. He holds a D.Phil. in economics from Oxford University, where he was a Rhodes Scholar. "Tackling the inequality pandemic: Is there a cure?" Brookings, 17 Nov. 2020, www.brookings.edu/research/tackling-the-inequality-pandemic-is-there-a-cure. [Quality Control]

Is rising inequality an inevitable consequence of today’s technology-driven economic transformations—and globalization? The answer is no. Policies have been slow to respond to the challenges of change. With better, more responsive policies, more inclusive economic outcomes are possible.

The first order of business is to contain the pandemic and address its immediate health and economic consequences that disproportionately hurt the less well-off. Countries have responded in varying degrees by taking preventive measures against the pandemic, shoring up health systems, strengthening safety nets, and implementing policies to cushion the impact on jobs and economic activity. The more successful these actions are in protecting the vulnerable and supporting economic recovery, the less will be the direct impact of the crisis in worsening existing inequalities.

Beyond these immediate actions is a longer-term agenda to address the underlying drivers of the secular rise in inequality. Policies to reduce inequality are often seen narrowly in terms of redistribution―tax and transfer policies. This is of course an important element, especially given the erosion of the state’s redistributive role. In particular, systems for taxing income and wealth should be bolstered in light of the new distributional dynamics. But there is a much broader policy agenda of “predistribution” that can make the growth process itself more inclusive.[7]

#### Economic inequality and diversionary nationalism sparks international conflict due to greater military intervention

**Solt 11** – Frederick Solt, Ph.D. in Political Science from University of North Carolina at Chapel Hill, currently Associate Professor of Political Science at the University of Iowa, Assistant Professor, Departments of Political Science and Sociology, Southern Illinois at the time of publication (“Diversionary Nationalism: Economic Inequality and the Formation of National Pride,” *The Journal of Politics*, Vol. 73, No. 3, pgs. 821-830, July 2011, Available to Subscribing Institutions)

One of the oldest theories of nationalism is that **states instill the nationalist myth in their citizens to divert their attention from great economic inequality** **and** so **forestall pervasive unrest**. **Because the very concept of nationalism obscures the extent of inequality** and is a potent tool for delegitimizing calls for redistribution, **it is a perfect diversion**, **and states should be expected to engage in more nationalist mythmaking when inequality increases**. **The evidence presented by this study supports this theory**: across the countries and over time, **where economic inequality is greater, nationalist sentiments are substantially more widespread**.

This result adds considerably to our understanding of nationalism. To date, many scholars have focused on the international environment as the principal source of threats that prompt states to generate nationalism; the importance of the domestic threat posed by economic inequality has been largely overlooked. However, at least in recent years, **domestic inequality is a far more important stimulus for the generation of nationalist sentiments than the international context**. **Given that nuclear weap ons**—either their own or their allies’—**rather than the mass army now serve as the primary defense of many countries against being overrun by their enemies, perhaps this is not surprising**: nationalism-inspired mass mobilization is simply no longer as necessary for protection as it once was (see Mearsheimer 1990, 21; Posen 1993, 122–24).

Another important implication of the analyses presented above is that growing economic inequality may increase ethnic conflict. **States may foment national pride to stem discontent with increasing inequality, but this pride can also lead to more hostility towards immigrants and minorities**. Though pride in the nation is distinct from chauvinism and outgroup hostility, it is nevertheless closely related to these phenomena, and recent experimental research has shown that members of majority groups who express high levels of national pride can be nudged into intolerant and xenophobic responses quite easily (Li and Brewer 2004). This finding suggests that, **by leading to the creation of more national pride, higher levels of inequality produce environments favorable to those who would inflame ethnic animosities**.

**Another** and perhaps even more worrisome **implication regards the likelihood of war**. **Nationalism is frequently suggested as a cause of war**, **and more national pride has been found to result in a much greater demand for national security even at the expense of civil liberties** (Davis and Silver 2004, 36–37) **as well as preferences for “a more militaristic foreign affairs posture** **and a more interventionist role in world politics**” (Conover and Feldman 1987, 3). To the extent that these preferences influence policymaking, the **growth in economic inequality** over the last quarter century **should be expected to lead to more aggressive foreign policies and more international conflict**. If economic inequality prompts states to generate diversionary nationalism as the results presented above suggest, then **rising inequality could make for a more dangerous world**.

The results of this work also contribute to our still limited knowledge of the relationship between economic inequality and democratic politics. In particular, it helps explain the fact that, contrary to median-voter models of redistribution (e.g., Meltzer and Richard 1981), **democracies with higher levels of inequality do not consistently respond with more redistribution** (e.g., Bénabou 1996). **Rather than allowing redistribution to be decided through the democratic process suggested by such models**, this work suggests that **states often respond to higher levels of inequality with more nationalism**. Nationalism then works to divert attention from inequality, so many citizens neither realize the extent of inequality nor demand redistributive policies. By prompting states to promote nationalism, greater economic inequality removes the issue of redistribution from debate and therefore narrows the scope of democratic politics.

#### And poverty is unjust and violent on a scale greater than extinction

Gilligan 96 (James Gilligan, Prof @ Harvard, Department of Psychiatry at Harvard Med and Director of the Center for the Study of Violence, 1996, Violence: Our Deadly Epidemic and its Causes p. 191-196)  
The deadliest form of violence is poverty. You cannot work for one day with the violent people who fill our prisons and mental hospitals for the criminally insane without being forcible and constantly reminded of the extreme poverty and discrimination that characterizes their lives. Hearing about their lives, and about their families and friends, you are forced to recognize the truth in Gandhi’s observation that the deadliest form of violence is poverty. Not a day goes by without realizing that trying to understand them and their violent behavior in purely individual terms is impossible and wrong-headed. Any theory of violence, especially a psychological theory, that evolves from the experience of men in maximum security prisons and hospitals for the criminally insane must begin with the recognition that these institutions are only microcosms. They are not where the major violence in our society takes place, and the perpetrators who fill them are far from being the main causes of most violent deaths. Any approach to a theory of violence needs to begin with a look at the structural violence in this country. Focusing merely on those relatively few men who commit what we define as murder could distract us from examining and learning from those structural causes of violent death that are far more significant from a numerical or public health, or human, standpoint. By “structural violence” I mean the increased rates of death, and disability suffered by those who occupy the bottom rungs of society, as contrasted with the relatively lower death rates experienced by those who are above them. Those excess deaths (or at least a demonstrably large proportion of them) are a function of class structure; and that structure is itself a product of society’s collective human choices, concerning how to distribute the collective wealth of the society. These are not acts of God. I am contrasting “structural” with “behavioral violence,” by which I mean the non-natural deaths and injuries that are caused by specific behavioral actions of individuals against individuals, such as the deaths we attribute to homicide, suicide, soldiers in warfare, capital punishment, and so on. Structural violence differs from behavioral violence in at least three major respects. \*The lethal effects of structural violence operate continuously, rather than sporadically, whereas murders, suicides, executions, wars, and other forms of behavioral violence occur one at a time. \*Structural violence operates more or less independently of individual acts; independent of individuals and groups (politicians, political parties, voters) whose decisions may nevertheless have lethal consequences for others. \*Structural violence is normally invisible, because it may appear to have had other (natural or violent) causesThe finding that structural violence causes far more deaths than behavioral violence does is not limited to this country. Kohler and Alcock attempted to arrive at the number of excess deaths caused by socioeconomic inequities on a worldwide basis. Sweden was their model of the nation that had come closes to eliminating structural violence. It had the least inequity in income and living standards, and the lowest discrepancies in death rates and life expectancy; and the highest overall life expectancy in the world. When they compared the life expectancies of those living in the other socioeconomic systems against Sweden, they found that 18 million deaths a year could be attributed to the “structural violence” to which the citizens of all the other nations were being subjected. During the past decade, the discrepancies between the rich and poor nations have increased dramatically and alarmingly. The 14 to 18 million deaths a year caused by structural violence compare with about 100,000 deaths per year from armed conflict. Comparing this frequency of deaths from structural violence to the frequency of those caused by major military and political violence, such as World War II (an estimated 49 million military and civilian deaths, including those by genocide—or about eight million per year, 1939-1945), the Indonesian massacre of 1965-66 (perhaps 575,000) deaths), the Vietnam war (possibly two million, 1954-1973), and even a hypothetical nuclear exchange between the U.S. and the U.S.S.R. (232 million), it was clear that even war cannot begin to compare with structural violence, which continues year after year. In other words, every fifteen years, on the average, as many people die because of relative poverty as would be killed by the Nazi genocide of the Jews over a six-year period. This is, in effect, the equivalent of an ongoing, unending, in fact accelerating, thermonuclear war, or genocide, perpetrated on the weak and poor every year of every decade, throughout the world. Structural violence is also the main cause of behavioral violence on a socially and epidemiologically significant scale (from homicide and suicide to war and genocide). The question as to which of the two forms of violence—structural or behavioral—is more important, dangerous, or lethal is moot, for they are inextricably related to each other, as cause to effect.

### NC - ! – Space Exploration

#### Investing in space exploration solves extinction, the economy, and warming

Dubner, American journalist & Freakonomics Author, 8

(Steven, Is Space Exploration Worth the Cost? A Freakonomics Quorum, Freakonomics Blog, http://freakonomics.com/2008/01/11/is-space-exploration-worth-the-cost-a-freakonomics-quorum/)

Pretend that instead of being responsible for your household budget, which means paying for rent or a mortgage, transportation, some schooling costs, groceries, healthcare, vacation, etc., you are instead responsible for a considerably larger budget that provides a variety of services for about 300 million people including the maintenance of an army, protecting the borders, etc. In other words, pretend you are responsible for the U.S. Federal budget. And now ask yourself how much of that money you want to spend on manned space travel, and why. We gathered up a group of space authorities — G. Scott Hubbard, Joan Vernikos, Kathleen M. Connell, Keith Cowing, and David M. Livingston, and John M. Logsdon — and asked them the following: Is manned space exploration worth the cost? Why or why not? Their responses are below. As I suggested above, take your time. For the impatient among you, here are a few highlights: Logsdon on a not-so-obvious incentive for manned space travel: “Space exploration can also serve as a stimulus for children to enter the fields of science and engineering.” Vernikos on the R.O.I. of space travel: “Economic, scientific and technological returns of space exploration have far exceeded the investment. … Royalties on NASA patents and licenses currently go directly to the U.S. Treasury, not back to NASA.” Cowing on space expenditures relative to other costs: “Right now, all of America’s human space flight programs cost around $7 billion a year. That’s pennies per person per day. In 2006, according to the USDA, Americans spent more than $154 billion on alcohol. We spend around $10 billion a month in Iraq. And so on.” I hope you enjoy their answers, and learn from them, as much as I did. G. Scott Hubbard, professor of Aeronautics and Astronautics at Stanford University and former director of the NASA Ames Research Center: The debate about the relative merits of exploring space with humans and robots is as old as the space program itself. Werner Von Braun, a moving force behind the Apollo Program that sent humans to the moon and the architect of the mighty Saturn V rocket, believed passionately in the value of human exploration — especially when it meant beating the hated Soviet Empire. James Van Allen, discoverer of the magnetic fields that bear his name, was equally ardent and vocal about the value of robotic exploration. There are five arguments that are advanced in any discussion about the utility of space exploration and the roles of humans and robots. Those arguments, in roughly ascending order of advocate support, are the following: 1. Space exploration will eventually allow us to establish a human civilization on another world (e.g., Mars) as a hedge against the type of catastrophe that wiped out the dinosaurs. 2. We explore space and create important new technologies to advance our economy. It is true that, for every dollar we spend on the space program, the U.S. economy receives about $8 of economic benefit. Space exploration can also serve as a stimulus for children to enter the fields of science and engineering. 3. Space exploration in an international context offers a peaceful cooperative venue that is a valuable alternative to nation state hostilities. One can look at the International Space Station and marvel that the former Soviet Union and the U.S. are now active partners. International cooperation is also a way to reduce costs. 4. National prestige requires that the U.S. continue to be a leader in space, and that includes human exploration. History tells us that great civilizations dare not abandon exploration. 5. Exploration of space will provide humanity with an answer to the most fundamental questions: Are we alone? Are there other forms of life beside those on Earth? It is these last two arguments that are the most compelling to me. It is challenging to make the case that humans are necessary to the type of scientific exploration that may bring evidence of life on another world. There are strong arguments on both sides. Personally, I think humans will be better at unstructured environment exploration than any existing robot for a very long time. There are those who say that exploration with humans is simply too expensive for the return we receive. However, I cannot imagine any U.S. President announcing that we are abandoning space exploration with humans and leaving it to the Chinese, Russians, Indians, Japanese or any other group. I can imagine the U.S. engaging in much more expansive international cooperation. Humans will be exploring space. The challenge is to be sure that they accomplish meaningful exploration. Joan Vernikos, a member of the Space Studies Board of the National Academy and former director of NASA’s Life Sciences Division: Why explore? Asked why he kept trying to climb Everest, English mountaineer George Mallory reputedly replied, “Because it was there.” Exploration is intrinsic to our nature. It is the contest between man and nature mixed with the primal desire to conquer. It fuels curiosity, inspiration and creativity. The human spirit seeks to discover the unknown, and in the process explore the physical and psychological potential of human endurance. There have always been the few risk-takers who ventured for the rest of us to follow. Because of earlier pioneers, air travel is now commonplace, and space travel for all is just around the corner. Economic and societal benefits are not immediately evident, but they always follow, as does our understanding of human potential to overcome challenges. Fifty years after Sputnik, space remains the next frontier. Without risking human lives, robotic technology such as unmanned missions, probes, observatories, and landers enables space exploration. It lays the groundwork, and does the scouting. But as I heard former astronaut Thomas Jones often say, “only a human can experience what being in space feels like, and only a human can communicate this to others.” It is humans who repair the Hubble telescope. It is humans who service the International Space Station (ISS). Mercury astronauts were the first to photograph Earth from space with hand-held cameras. Earth scientists in orbit on the ISS may view aspects of global change that only a trained eye can see. In addition, studying astronauts in the microgravity of space has been the only means of understanding how gravity affects human development and health here on Earth. It is highly probable that, in this century, humans will settle on other planets. Our ability to explore and sustain human presence there will not only expand Earth’s access to mineral resources but, should the need arise, provide alternative habitats for humanity’s survival. At what cost? Is there a price to inspiration and creativity? Economic, scientific and technological returns of space exploration have far exceeded the investment. Globally, 43 countries now have their own observing or communication satellites in Earth orbit. Observing Earth has provided G.P.S., meteorological forecasts, predictions and management of hurricanes and other natural disasters, and global monitoring of the environment, as well as surveillance and intelligence. Satellite communications have changed life and business practices with computer operations, cell phones, global banking, and TV. Studying humans living in the microgravity of space has expanded our understanding of osteoporosis and balance disorders, and has led to new treatments. Wealth-generating medical devices and instrumentation such as digital mammography and outpatient breast biopsy procedures and the application of telemedicine to emergency care are but a few of the social and economic benefits of manned exploration that we take for granted. Space exploration is not a drain on the economy; it generates infinitely more than wealth than it spends. Royalties on NASA patents and licenses currently go directly to the U.S. Treasury, not back to NASA. I firmly believe that the Life Sciences Research Program would be self-supporting if permitted to receive the return on its investment. NASA has done so much with so little that it has generally been assumed to have had a huge budget. In fact, the 2007 NASA budget of $16.3 billion is a minute fraction of the $13 trillion total G.D.P. “What’s the hurry?” is a legitimate question. As the late Senator William Proxmire said many years ago, “Mars isn’t going anywhere.” Why should we commit hard-pressed budgets for space exploration when there will always be competing interests? However, as Mercury, Gemini and Apollo did 50 years ago, our future scientific and technological leadership depends on exciting creativity in the younger generations. Nothing does this better than manned space exploration. There is now a national urgency to direct the creative interests of our youth towards careers in science and engineering. We need to keep the flame of manned space exploration alive as China, Russia, India, and other countries forge ahead with substantial investments that challenge U.S. leadership in space. Kathleen M. Connell, a principal of The Connell Whittaker Group, a founding team member of NASA’s Astrobiology Program, and former policy director of the Aerospace States Association: The value of public sector human space exploration is generally perceived as worth the cost when exploration outcomes address one or more national imperatives of the era. For example, in the twentieth century, the Soviet Union’s launch of Sputnik required a bold technological retort by the U.S. Apollo put boots on the moon, winning the first space race. The resulting foreign policy boost and psychic prestige for the U.S. more that justified the cost for the Cold War generation. Unquestionably, manned exploration of that era also created unintended economic consequences and benefits, such as the spinoff of miniaturization that led to computers and cell phones. Apollo also created new NASA centers in the South, acting as an unanticipated economic development anchor for those regions, both then and now. In the twenty-first century, what would happen if U.S. manned space programs were managed based upon the contemporary demands of the planet and the American taxpayer? NASA could be rewarded to explore, but with terrestrial returns as a priority. Space exploration crews could conduct global warming research on the International Space Station National Laboratory, while other crews from the public or private sector could rapidly assemble solar energy satellites for clean energy provision to Earth. Lunar settlements could be established to develop new energy sources from rare compounds that are in abundance on the moon. Getting to Mars, to develop a terrestrial lifeboat and to better understand the fate of planets, suddenly takes on new meaning and relevance. I have to come the conclusion, after over 20 years in the space industry, that addressing global challenges with space solutions that benefit humanity and American constituents is the key to justifying the cost of manned space exploration. I believe we are about to find out, all over again, if civil manned space capability and policy can adapt and rise to meet new imperatives. Keith Cowing, founder and editor of NASAWatch.com and former NASA space biologist. Right now, all of America’s human space flight programs cost around $7 billion a year. That’s pennies per person per day. In 2006, according to the USDA, Americans spent more than $154 billion on alcohol. We spend around $10 billion a month in Iraq. And so on. Are these things more important than human spaceflight because we spend more money on them? Is space exploration less important? Money alone is not a way to gauge the worthiness of the cost of exploring space. NASA is fond of promoting all of the spinoffs that are generated from its exploits, such as microelectronics. But are we exploring space to explore space, or are we doing all of this to make better consumer electronics? I once heard the late Carl Sagan respond to this question by saying, “you don’t need to go to Mars to cure cancer.” If you learn how to do that as a side benefit, well, that’s great, but there are probably more cost effective ways to get all of these spinoffs without leaving Earth. To be certain, tax dollars spent on space projects result in jobs — a large proportion of which are high paying, high tech positions. But many other government programs do that as well — some more efficiently. Still, for those who would moan that this money could be “better spent back on Earth,” I would simply say that all of this money is spent on Earth — it creates jobs and provides business to companies, just as any other government program does. You have to spend all of NASA’s money “on Earth.” There is no way to spend it in space — at least, not yet. Where am I going with this? Asking if space exploration — with humans or robots or both — is worth the effort is like questioning the value of Columbus’s voyages to the New World in the late 1490s. The promise at the time was obvious to some, but not to others. Is manned space exploration worth the cost? If we Americans do not think so, then why is it that nations such as China and India — nations with far greater social welfare issues to address with their limited budgets — are speeding up their space exploration programs? What is it about human space exploration that they see? Could it be what we once saw, and have now forgotten? As such, my response is another question: for the U.S. in the twenty-first century, is not sending humans into space worth the cost? David M. Livingston, host of The Space Show, a talk radio show focusing on increasing space commerce and developing space tourism: I hear this question a lot. So a few years ago, I decided to see what really happened to a public dollar spent on a good space program, compared to spending it on an entitlement program or a revenue generating infrastructure program. I used the school breakfast program for the test entitlement program. I chose Hoover Dam for the revenue generating infrastructure program. The space program I chose was the manned program to the moon consisting of the Mercury, Gemini, and Apollo programs. Let me briefly summarize what I discovered. All programs, if properly managed, can produce benefits in excess to the original invested dollar. There is no guarantee that a program will be properly managed, and this includes a space program. “Properly managed” implies many things, but I don’t think space is any more or less likely to be well managed than anything else the government does. A mismanaged space program wastes money, talent, and time, just like any other faulty program. As for what happened to the dollar invested in the respective programs, the school breakfast program was successful, in that it increased the number of kids who received breakfast. However, when funding for this program or this type of program stops, as soon as the last of the funds goes through the pipeline, the program is over. It has no life past government funding. I was unable to find an inspirational or motivational quality for the program leading to downstream business, economic, or science advancements. One could make the case that kids who benefited from the program went on through school to accomplish great things, and I don’t doubt that — I simply could not document it in my research. The Hoover Dam was very interesting. This project paid off its bond cost early, was a major contributor to the U.S. victory in World War II, and has been a huge economic factor for development in the Western part of the country. However, the Hoover Dam requires overhead and maintenance investment on a continual basis. It needs repairs, updates, modernization, and security, and it employs a labor force. Were we to stop investing in the Hoover Dam, over time it would lose its effectiveness and cease to be the value to our nation that it is now. Its value to us depends on our willingness to maintain, protect, and update it as necessary. The Hoover Dam and Lake Mead have given birth to thousands of private businesses, economic growth for the region, and much more. However, as with the entitlement program above, I could not find an inspirational or motivational aspect to the Hoover Dam. What I discovered about our manned lunar program was different. When I did this study, it was 34 years after the last dime had been spent on Apollo, the last of the manned moon programs. Thirty-four years later, when I asked guests on The Space Show, students, and people in space-related fields what inspired or motivated them to start a space business or pursue their science education, over 80 percent said they were inspired and motivated because of our having gone to the moon. Businesses were started and are now meeting payrolls, paying taxes, and sustaining economic growth because the founder was inspired by the early days of the manned space program, often decades after the program ended! This type of inspiration and motivation seems unique to the manned space program and, of late, to some of our robotic space missions. I found the same to be true when I asked the same question to Space Show guests from outside the U.S. John M. Logsdon, director of the Space Policy Institute and acting director of the Center for International Science and Technology Policy at George Washington University’s Elliott School of International Affairs: The high costs of sending humans into orbit and beyond are measured in dollars, rubles, or yuan. The benefits of human spaceflight are not so easily calculated, since they include both tangible and intangible payoffs. So answering the question, “Do the benefits outweigh the costs?” is not straightforward. If the payoffs are limited to scientific discovery, the position taken by many critics of human spaceflight is “no.” With both current and, especially, future robotic capabilities, the added value of human presence to missions aimed primarily at new understanding of the moon, Mars, near-Earth asteroids, and other celestial destinations most likely does not justify the added costs and risks involved. However, Steve Squyres, the principal investigator for the Mars Exploration Rovers, has frequently said that he wished that spirit and opportunity were working in partnership with humans on the surface of Mars; that combination, he argues, would greatly increase the scientific payoffs of the mission. To me, the primary justifications for sending people into space require that they travel beyond low Earth orbit. For the next few decades, the major payoffs from humans traveling to the moon and Mars are intangible, and linked to both national pride and national power. Space exploration remains an effort that can be led by only a few countries, and I believe that it should be part of what the United States does in its desire to be seen by both its citizens and the global public as a leader, one to be admired for its continued willingness to invest in pushing the frontiers of human activity. In the longer run, I believe that human exploration is needed to answer two questions. One is: “Are there activities in other places in the solar system of such economic value that they justify high costs in performing them?” The other is: “Can humans living away from Earth obtain at least a major portion of what they need to survive from local resources?” If the answer to both questions is “yes,” then I believe that eventually some number of people in the future will establish permanent settlements away from Earth, in the extreme case to ensure that the human species will survive a planetary catastrophe, but also because people migrate for both economic opportunities and new experiences. That is a big jump from today’s argument regarding the costs and benefits of human spaceflight, but I believe such a long range perspective is the best way to justify a new start in human space exploration.

### NASA DA

#### NASA is preserving resources by leveraging private partnerships

Miriam Kramer 21, author of Space, “NASA's plans for the future hinge on the success of private companies,” Axios, 12-7-2021, https://www.axios.com/nasa-private-spaceflight-plans-5a5710e6-5223-4da3-8c5d-5a712e1d862e.html

The private space players who will drive NASA's plans for the coming decade are declaring themselves and defining the stakes. Why it matters: NASA plans to focus on getting people to Mars and the Moon, and its deep space exploration ambitions hinge on the agency being able to successfully hand over major operations in low-Earth orbit to private companies. The space agency hopes companies will build private space stations that its astronauts can use and to continue to buy space on private rockets for launching its satellites and other payloads to orbit and beyond. NASA's "big experiment" right now is to test where these commercial partnerships work, the Planetary Society's Casey Dreier told Axios. What's happening: Last week, NASA announced it would award multimillion-dollar contracts to three teams of commercial space companies to start designing and building privately operated space stations.

#### Plan forces spending trade-offs that crush effective Earth sciences --- risks catastrophic climate change

Haymet 7 (Tony, Director of the Scripps Institution of Oceanography – University of California, San Diego, Mark Abbott, Dean of the College of Oceanic and Atmospheric Science – Oregon State University, and Jim Luyten, Acting Director – Woods Hole Oceanographic Institution, “The Planet NASA Needs to Explore”, Washington Post, 5-10, [http://www.washingtonpost.com/wp-dyn/content/article/2007/05/09/AR2007050902451.html](http://www.lexis.com/research/retrieve))

Decades ago, a shift in NASA priorities sidelined progress in human space exploration. As momentum gathers to reinvigorate human space missions to the moon and Mars, we risk hurting ourselves, and Earth, in the long run. Our planet -- not the moon or Mars -- is under significant threat from the consequences of rapid climate change. Yet the changing NASA priorities will threaten exploration here at home.

NASA not only launches shuttles and builds space stations, it also builds and operates our nation's satellites that observe and monitor the Earth. These satellites collect crucial global data on winds, ice and oceans. They help us forecast hurricanes, track the loss of Arctic sea ice and the rise of sea levels, and understand and prepare for climate changes.

NASA's budget for science missions has declined 30 percent in the past six years, and that trend is expected to continue. As more dollars are reallocated to prepare for missions back to the moon and Mars, sophisticated new satellites to observe the Earth will be delayed, harming Earth sciences.

The National Academy of Sciences has noted that the Landsat satellite system, which takes important measurements of global vegetation, is in its fourth decade of operation and could fail without a clear plan for continuation. The same is true for the QuikSCAT satellite, which provides critical wind data used in forecasting hurricanes and El Niño effects.

In January, a partnership of university and NASA scientists demonstrated that climate change and higher ocean temperatures were reducing the growth of microscopic plants and animals at the heart of the marine food web.

Their analysis was based on nearly a decade of NASA satellite measurements of ocean color, which unfortunately are at risk of being interrupted for several years.

Sea levels are rising, and the Arctic Ocean may be ice-free in summer. The buildup of carbon dioxide in the oceans threatens to make them more acidic, which may in turn hinder the ability of some types of marine life, including corals, to build their shells and skeletons. We must learn as much as we can to assess these threats and develop solutions.

Satellites provide coverage of vast, remote regions of our planet that would otherwise remain unseen, especially the oceans, which play an important role in climate change. Without accurate data on such fundamentals as sea surface height, temperatures and biomass, as well as glacier heights and snowpack thickness, we will not be able to understand the likelihood of dangers such as more severe hurricanes along the Gulf Coast or more frequent forest fires in the Pacific Northwest.

Climate change is the most critical problem the Earth has ever faced.

Government agencies and the private sector, as well as individual citizens, need to better grasp the risks and potential paths of global climate change. Mitigating these risks and preparing for the effects of warming will require scientific understanding of how our complex planet operates, how it is changing, and how that change will affect the environment and human society.

John F. Kennedy's brilliant call to put a man on the moon by the end of the 1960s set an arbitrary deadline, but the deadline we face today is set by nature. NASA must continue to play a vital role in helping find ways to protect our planet for (and perhaps from) its intelligent life. Exploration of space is a noble quest. But we can't afford to be so starry-eyed that we overlook our own planet.

#### Warming is inevitable but adjusting government policy can address the worst effects – specifically, for sea level rise. US responses are modeled globally.

**Economist 17**, "How government policy exacerbates hurricanes like Harvey," Economist, https://www.economist.com/news/leaders/21727898-if-global-warming-were-not-enough-threat-poor-planning-and-unwise-subsidies-make-floods

THE extent of the devastation will become clear only when the floodwater recedes, leaving ruined cars, filthy mud-choked houses and the bloated corpses of the drowned. But as we went to press, with the rain pounding South Texas for the sixth day, Hurricane Harvey had already set records as America’s most severe deluge (see Briefing). In Houston it drenched Harris County in over 4.5trn litres of water in just 100 hours—enough rainfall to cover an eight-year-old child. The fate of America’s fourth-largest city holds the world’s attention, but it is hardly alone. In India, Bangladesh and Nepal, at least 1,200 people have died and millions have been left homeless by this year’s monsoon floods. Last month torrential rains caused a mudslide in Sierra Leone that killed over 1,000—though the exact toll will never be known. Around the world, governments are grappling with the threat from floods. This will ultimately be about dealing with climate change. Just as important, is correcting short-sighted government policy and the perverse incentives that make flooding worse. Judgment day The overwhelming good news is that storms and flooding have caused far fewer deaths in recent decades, thanks to better warning systems and the construction of levees, ditches and shelters. The cyclone that struck Bangladesh in 1970 killed 300,000-500,000 people; the most recent severe one, in 2007, killed 4,234. The bad news is that storms and floods still account for almost three-quarters of weather-related disasters, and they are becoming more common. According to the Munich Re, a reinsurer, their number around the world has increased from about 200 in 1980 to over 600 last year. Harvey was the third “500-year” storm to strike Houston since 1979. At the same time, floods and storms are also becoming more costly. By one estimate, three times as many people were living in houses threatened by hurricanes in 2010 as in 1970, and the number is expected to grow as still more people move to coastal cities. The UN reckons that, in the 20 years to 2015, storms and floods caused $1.7trn of destruction; the World Health Organisation estimates that, in real terms, the global cost of hurricane damage is rising by 6% a year. Flood losses in Europe are predicted to increase fivefold by 2050. One cause is global warming. The frequency and severity of hurricanes vary naturally—America has seen unusually few in the past decade. Yet the underlying global trend is what you would expect from climate change. Warmer seas evaporate faster and warmer air can hold more water vapour, which releases energy when it condenses inside a weather system, feeding the violence of storms and the intensity of deluges. Rising sea levels, predicted to be especially marked in the Gulf of Mexico, exacerbate storm surges, adding to the flooding. Harvey was unusually devastating because it suddenly gained strength before it made landfall on Friday; it then stayed put, dumping its rain on Houston before returning to the Gulf. Again, that is consistent with models of a warmer world. Poor planning bears even more blame. Houston, which has almost no restrictions on land-use, is an extreme example of what can go wrong. Although a light touch has enabled developers to cater to the city’s rapid growth—1.8m extra inhabitants since 2000—it has also led to concrete being laid over vast areas of coastal prairie that used to absorb the rain. According to the Texas Tribune and ProPublica, a charity that finances investigative journalism, since 2010 Harris County has allowed more than 8,600 buildings to be put up inside 100-year floodplains, where floods have a 1% chance of occurring in any year. Developers are supposed to build ponds to hold run-off water that would have soaked into undeveloped land, but the rules are poorly enforced. Because the maps are not kept up to date, properties supposedly outside the 100-year floodplain are being flooded repeatedly. Government failure adds to the harm. Developing countries are underinsured against natural disasters. Swiss Re, a reinsurer, says that of the $50bn or so of losses to floods, cyclones and other disasters in Asia in 2014, only 8% were covered. The Bank of International Settlements calculates that the worst natural catastrophes typically permanently lower the afflicted country’s GDP by almost 2%. America has the opposite problem—the federal government subsidises the insurance premiums of vulnerable houses. The National Flood Insurance Programme (NFIP) has been forced to borrow because it fails to charge enough to cover its risk of losses. Underpricing encourages the building of new houses and discourages existing owners from renovating or moving out. According to the Federal Emergency Management Agency, houses that repeatedly flood account for 1% of NFIP’s properties but 25-30% of its claims. Five states, Texas among them, have more than 10,000 such households and, nationwide, their number has been going up by around 5,000 each year. Insurance is meant to provide a signal about risk; in this case, it stifles it. Mend the roof while the sun shines What to do? Flooding strengthens the case for minimising climate change, which threatens to make wet places wetter and storms stormier. Even those who doubt the science would do well to see action as an insurance policy that pays out if the case is proven. However, that will not happen fast, even if all countries, including America, sign up to international agreements. More immediately, therefore, politicians can learn from Houston. Cities need to protect flood defences and catchment areas, such as the wetlands around Kolkata and the lakes in and around Pokhara in Nepal, whose value is becoming clear. Flood maps need to be up to date. Civil engineers, often starved of funds and strangled by bureaucracy, should be building and reinforcing levees and reservoirs now, before it is too late. The NFIP should start to charge market premiums and developing countries should sell catastrophe bonds. All this is a test of government, of foresight and the ability to withstand the lobbying of homeowners and developers. But politicians and officials who fail the test need to realise that, sooner or later, they will wake up to a Hurricane Harvey of their own.

#### The impact’s global war

Eric **Holthaus 15**, editor at rollingstone magazine citing James Hansen, former NASA climatologist, "The Point of No Return: Climate Change Nightmares Are Here," Rolling Stone, accessed 10-23-2016, http://www.rollingstone.com/politics/news/the-point-of-no-return-climate-change-nightmares-are-already-here-20150805

On July 20th, James Hansen, the former NASA climatologist who brought climate change to the public's attention in the summer of 1988, issued a bombshell: He and a team of climate scientists had identified a newly important feedback mechanism off the coast of Antarctica that suggests mean sea levels could rise 10 times faster than previously predicted: 10 feet by 2065. The authors included this chilling warning: If emissions aren't cut, "We conclude that multi-meter sea-level rise would become practically unavoidable. Social disruption and economic consequences of such large sea-level rise could be devastating. It is not difficult to imagine that conflicts arising from forced migrations and economic collapse might make the planet ungovernable, threatening the fabric of civilization."

### Case

#### Capitalism is sustainable – solves war, environment, and quality of life – prefer empirics

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

However, things are more complicated than the arguments above would suggest, and the benefits of capitalism, especially for the world's poorest and most vulnerable people, are in fact myriad and significant. In addition, as we will see in this section, many experts argue that capitalism is not the fundamental cause of the previously described problems but rather an essential component of the best solutions to them and of the best methods for promoting our goals of health, well-being, and justice. To see where the defenders of capitalism are coming from, consider an analogy involving a response to a pandemic: if a country administered a rushed and untested vaccine to its population that ended up killing people, we would not say that vaccines were the problem. Instead, the problem would be the flawed and sloppy policies of vaccine implementation. Vaccines might easily remain absolutely essential to the correct response to such a pandemic and could also be essential to promoting health and flourishing, more generally. The argument is similar with capitalism according to the leading mainstream arguments in favor of it: Capitalism is an essential part of the best society we could have, just like vaccines are an essential part of the best response to a pandemic such as COVID-19. But of course both capitalism and vaccines can be implemented poorly, and can even do harm, especially when combined with other incorrect policy decisions. But that does not mean that we should turn against them—quite the opposite. Instead, we should embrace them as essential to the best and most just outcomes for society, and educate ourselves and others on their importance and on how they must be properly designed and implemented with other policies in order to best help us all. In fact, the argument in favor of capitalism is even more dramatic because it claims that much more is at stake than even what is at stake in response to a global pandemic—what is at stake with capitalism is nothing less than whether the world's poorest and most vulnerable billion people will remain in conditions of poverty and oppression, or if they will instead finally gain access to what is minimally necessary for basic health and wellbeing and become increasingly affluent and empowered. The argument in favor of capitalism proceeds as follows: Premise 1. Development and the past. Over the course of recorded human history, the majority of historical increases in health, wellbeing, and justice have occurred in the last two centuries, largely as a result of societies adopting or moving toward capitalism. Capitalism is a relevant cause of these improvements, in the sense that they could not have happened to such a degree if it were not for capitalism and would not have happened to the same degree under any alternative noncapitalist approach to structuring society. The argument in support of this premise relies on observed relationships across societies and centuries between indicators of degree of capitalism, wealth, investments in public goods, and outcomes for health, wellbeing, and justice, together with econometric analysis in support of the conclusion that the best explanation of these correlations and the underlying mechanism is that large increases in health, wellbeing, and justice are largely driven by increasing investments in public goods. The scale of increased wealth necessary to maximize these investments requires capitalism. Thus, as capitalist societies have become dramatically wealthier over the past hundred years (and wealthier than societies with alternative systems), this has allowed larger investments in public goods, which simply has not been possible in a sustained way in societies without the greater wealth that capitalism makes possible. Important investments in public goods include investments in basic medical knowledge, in health and nutrition programs, and in the institutional capacity and know-how to regulate society and capitalism itself. As a result, capitalism is a primary driver of positive outcomes in health and wellbeing (such as increased life expectancy, lowered child and maternal mortality, adequate calories per day, minimized infectious disease rates, a lower percentage and number of people in poverty, and more reported happiness);5 and in justice (such as reduced deaths from war and homicide; higher rankings in human rights indices; the reduced prevalence of racist, sexist, homophobic opinions in surveys; and higher literacy rates).6 These quantifiable positive consequences of global capitalism dramatically outweigh the negative consequences (such as deaths from pollution in the course of development), with the result that the net benefits from capitalism in terms of health, wellbeing, and justice have been greater than they would have been under any known noncapitalist approach to structuring society.7 Premise 2. Economics, ethics, and policy. Although capitalism has often been ill-regulated and therefore failed to maximize net benefits for health, wellbeing, and justice, it can become well-regulated so that it maximizes these societal goals, by including mechanisms identified by economists and other policy experts that do the following: optimally8 regulate negative effects such as pollution and monopoly power, and invest in public goods such as education, basic healthcare, and fundamental research including biomedical knowledge (more generally, policies that correct the failures of free markets that economists have long recognized will arise from “externalities” in the absence of regulation);9 ensure equity and distributive justice (for example, via wealth redistribution);10 ensure basic rights, justice, and the rule of law independent of the market (for example, by an independent judiciary, bill of rights, property rights, and redistribution and other legislation to correct historical injustices due to colonialism, racism, and correct current and historical distortions that have prevented markets from being fair);11 and ensure that there is no alternative way of structuring society that is more efficient or better promotes the equity, justice, and fairness goals outlined above (by allowing free exchange given the regulations mentioned).12 To summarize the implication of the first two premises, well-regulated capitalism is essential to best achieving our ethical goals—which is true even though capitalism has certainly not always been well regulated historically. Society can still do much better and remove the large deficits in terms of health, wellbeing, and justice that exist under the current inferior and imperfect versions of capitalism. Premise 3. Development and the future. If the global spread of capitalism is allowed to continue, desperate poverty can be essentially eliminated in our lifetimes. Furthermore, this can be accomplished faster and in a more just way via well-regulated global capitalism than by any alternatives. If we instead opt for less capitalism, less growth, and less globalization, then desperate poverty will continue to exist for a significant portion of the world's population into the further future, and the world will be a worse and less equitable place than it would have been with more capitalism. For example, in a world with less capitalism, there would be more overpopulation, food insecurity, air pollution, ill health, injustice, and other problems. In part, this is because of the factors identified by premise 1, which connect a turn away from capitalism with a turn away from continuing improvements in health, wellbeing, and justice, especially for the developing world. In addition, fertility declines are also a consequence of increased wealth, and the size of the population is a primary determinant of food demand and other environmental stressors.13 Finally, as discussed at length in the next section of the essay, capitalism can be naturally combined with optimal environmental regulations.14 Even bracketing anything like optimal regulation, it remains true that sufficiently wealthy nations reduce environmental degradation as they become wealthier, whereas developing nations that are nearing peak degradation will remain stuck at the worst levels of degradation if we stall growth, rather than allowing them to transition to less and less degradation in the future via capitalism and economic growth.15 In contrast, well-regulated capitalism is a key part of the best way of coping with these problems, as well as a key part of dealing with climate change, global food production, and other specific challenges, as argued at length in the next section. Here it is important to stress that we should favor well-regulated capitalism that includes correct investments in public goods over other capitalist systems such as the neoliberalism of the recent past that promoted inadequately regulated capitalism with inadequate concern for externalities, equity, and background distortions and injustices.16

#### Cap is sustainable – innovation is key to solve the climate and the alt can’t solve

Karlsson 21 – (Rasmus, "Learning in the Anthropocene" Soc. Sci. 10, no. 6: 233. <https://doi.org/10.3390/socsci10060233> 18 June 2021)// gcd

Unpacking this argument, it is perhaps useful to first recognize that, stable as the Holocene may have seemed from a human perspective, life was always vulnerable to a number of cosmic risks, such as bolide collisions, risks that only advanced technologies can mitigate. Similarly, the Black Death of the 14th century should serve as a powerful reminder of the extreme vulnerability of pre-industrial societies at a microbiological level. Nevertheless, it is reasonable to think of the Holocene as providing a relatively stable baseline against which the ecological effects of technological interventions could hypothetically be evaluated. With most human activities being distinctively local, nature would for the most part “bounce back” (even if the deforestation of the Mediterranean basin during the Roman period is an example of that not always being the case) while larger geophysical processes, such as the carbon cycle, remained entirely beyond human intentional control. Even if there has been some debate about what influence human activities had on the preindustrial climate (Ruddiman 2007), anthropogenic forcing was in any case both marginal and gradual. All this changed with the onset of the Great Acceleration by which humans came to overwhelm the great forces of nature, causing untold damage to fragile ecosystems and habitats everywhere, forever altering the trajectory of life on the planet (Steffen et al. 2011b). In a grander perspective, humanity may one day become an interplanetary species and thus instrumental in safeguarding the long-term existence of biological life, but for the moment, its impact is ethically dubious at best as the glaciers melt, the oceans fill up with plastics, and vast number of species are driven to extinction. Faced with these grim realities, it is of course not surprising that the first impulse is to seek to restore some kind primordial harmony and restrain human activities. Yet, it is important to acknowledge that, even if their aggregate impact may have been within the pattern of Holocene variability, pre-modern Western agricultural societies were hardly “sustainable” in any meaningful sense. Experiencing permanent scarcity, violent conflict was endemic (Gat 2013), and as much as some contemporary academics like to attribute all evils to “capitalism” (Malm 2016), pre-capitalist societies exhibited no shortage of religious intolerance and other forms of social domination. It is thus not surprising that some have argued the need to reverse the civilizational arc further yet and return to a preliterate hunter-gather existence (Zerzan 2008) even if this, obviously, has very little to do with existing political realities and social formations. Under Holocene conditions, the short-term human tragedy may have been the same, but it did not undermine the long-term ability of the planet to support life. In a world of eight billion people, already accumulated emissions in the atmosphere have committed the planet to significant warming under the coming centuries, with an increasing probability that committed warming already exceeds the 1.5-degree target of the Paris Agreement even if all fossil-fuel emissions were to stop today (Mauritsen and Pincus 2017). This means that sustained negative emissions, presumably in combination with SRM, will most likely be needed just to stabilize global temperatures, not to mentioning countering the flow of future emissions. According to the Intergovernmental Panel on Climate Change (IPCC), assuming that all the pledges submitted under the Paris Agreement are fulfilled, limiting warming to 1.5 degrees will still require negative emissions in the range of 100—1000 gigatons of CO2 (Hilaire et al. 2019, p. 190). The removal of carbon dioxide at gigaton scales from the atmosphere will presumably require the existence of an advanced industrial society since low-tech options, such as afforestation, will be of limited use (Gundersen et al. 2021; Seddon et al. 2020), especially in a future of competing land-uses. It is against this backdrop of worsening climate harms that the limits of “precaution”, at least as conventionally understood, become apparent. While degrowth advocates tend to insist that behavioral change, even explicitly betting on a “social miracle” (Kallis 2019, p. 195), is always preferable to any technological risk-taking (Heikkurinen 2018), that overlooks both the scope of the sustainability challenge and the lack of public consent to any sufficiently radical political project (Buch-Hansen 2018). While there may be growing willingness to pay for, say, an electric vehicle (Hulshof and Mulder 2020), giving up private automobile use altogether is obviously a different animal, to say nothing about a more fundamental rematerialization of the economy (Hausknost 2020). Again, the problem is one in which change either (a) remains marginal yet ecologically insufficient or (b) becomes sufficiently radical yet provokes a strong political counterreaction. A similar dynamic can be expected to play out at the international level where countries that remain committed to growth would quickly gain a military advantage. To make matters worse, there is also a temporal element to this dynamic since any regime of frugality and localism would have to be policed indefinitely in order to prevent new unsustainable patterns of development from re-emerging later on. All this begs the obvious question, if the political and economic enforcement of the planetary boundaries are fraught with such political and social difficulties, would it not be better to instead try to transcend them through technological innovation? Surprisingly, any high-energy future would most likely be subject to many of the same motivational and psychological constraints that hinder a low-energy future. While history shows that existing nuclear technologies could in theory displace all fossil fuels and meet the most stringent climate targets (Qvist and Brook 2015), it seems extremely unlikely, to put it mildly, that thousands of new reactors will be built over the course of the coming decades in response to climate change. Outside the world of abstract computer modelling, real world psychological and cultural inertia tends to ensure that political decision-making, at least for the most part, gravitates to what is considered “reasonable” and “common sense”—such as medium emissions electricity grids in which wind and solar are backed by biomass and gas—rather than what any utilitarian optimization scenario may suggest. Even if the global benefits of climate stabilization would be immense, the standards by which local nuclear risks are assessed, as clearly illustrated by the Fukushima accident which led to a worldwide retreat from nuclear energy despite only causing one confirmed death (which, though obviously regrettable, has to be put in relation to the hundred and thousands of people dying every year from the use of fossil fuels), underscores the uneven distribution of perceived local risks versus global benefits and the associated problem of socio-political learning across spatial scales. Almost two decades ago, Ingolfur Blühdorn identified “simulative eco-politics” as a key strategy by which liberal democracies reconcile an ever-heightened rhetoric of environmental crisis with their simultaneous defense of the core principles of consumer capitalism (Blühdorn 2007). Since then, declarations that we only have “ten years to save the planet” have proliferated, and so have seemingly bold investments in renewable energy, most recently in the form of US President Joseph Biden’s USD 2.25 trillion climate and infrastructure plan. Still, without a meaningful commitment to either radical innovation or effective degrowth, it is difficult to see how the deployment of yet more wind turbines or the building of new highways will in any way be qualitatively different from what Blühdorn pertinently described as sustaining “what is known to be unsustainable” (Blühdorn 2007, p. 253). However, all is not lost in lieu of more authentic forms of eco-politics. Independent of political interventions, accelerating technological change, in particular with regard to computing and intelligent machine labor, may one day make large-scale precision manipulation of the physical world possible in ways that may solve many problems that today seem intractable (Dorr 2016). Similarly, breakthroughs in synthetic biology may hold the key to environmentally benign biofuels and carbon utilization technologies. Yet, all such progress remains hypothetical and uncertain for now. Given what is at stake, there is an obvious danger in submitting to naïve technological optimism. What is less commonly recognized is that naïve optimism with regard to the prospects of behavioral change may be equally dangerous. While late-capitalist affluence has enabled many postmaterial identities and behaviors, such as bicycling, hobby farming, and other forms of emancipatory self-expression, a collapsing economy could quickly lead to a reversal back to survivalist values, traditional hierarchical forms of domination, and violence (Quilley 2011, p. 77). As such, it is far from obvious what actions would actually take the world as a whole closer to long-term sustainability. If sustainability could be achieved by a relatively modest reduction in consumption rates or behavioral changes, such as a ban on all leisure flights, then there would be a strong moral case for embracing degrowth. Yet, recognizing how farreaching measures in terms of population control and consumption restrictions that would be needed, the case quickly becomes more ambiguous. While traditional environmentalism may suggest that retreating from the global economy and adopting a low-tech lifestyle would increase resilience (Alexander and Yacoumis 2018), it may do very much the opposite by further fragmenting global efforts and slowing the pace of technological innovation. Without an orderly and functioning world trade system, local resources scarcities would be exacerbated, as seen most recently with the different disruptions to vaccine supply chains. In essence, given the lack of a stable Holocene baseline to revert to, it becomes more difficult to distinguish proactionary “risk-taking” from “precaution”, especially as many ecosystems have already been damaged beyond natural recovery. In this context, it is noteworthy that many of the technologies that can be expected to be most crucial for managing a period of prolonged overshoot (such as next-generation nuclear, engineering biology, large-scale carbon capture and SRM) are also ones that traditional environmentalism is most strongly opposed to. 3. Finding Indicators From the vantage point of the far-future, at least the kind depicted in the fictional universe of Star Trek, human evolution is a fairly straightforward affair along an Enlightenment trajectory by which ever greater instrumental capacity is matched by similar leaps in psychological maturity and expanding circles of moral concern. With the risk of sounding Panglossian, one may argue that the waning of interstate war in general and the fact that there has not been any major nuclear exchange in particular, does vindicate such an optimistic reading of history. While there will always be ups and downs, as long as the most disastrous outcomes are avoided, there will still be room for learning and gradual political accommodation. Taking such a longer view, it would nevertheless be strange if development was simply linear, that former oppressors would just accept moral responsibility or that calls for gender or racial justice would not lead to self-reinforcing cycles of conservative backlash and increasingly polarizing claims. Still, over the last couple of centuries, there is little doubt that human civilization has advanced significantly, both technologically and ethically (Pinker 2011), at least from a liberal and secular perspective. However, unless one subscribes to teleology, there is nothing inexorable with this development and, it may be that the ecological, social, and political obstacles are simply too great to ever allow for the creation of a Wellsian borderless world (Pedersen 2015) that would allow everyone to live a life free from material want and political domination. On the other hand, much environmental discourse tends to rush ahead in the opposite direction and treat the c limate crisis as ultimate evidence of humanity’s fallen nature when the counter-factual case, that it would be possible for a technological civilization to emerge without at some point endangering its biophysical foundations, would presumably be much less plausible. From an astrobiological perspective, it is easy to imagine how the atmospheric chemistry of a different planet would be more volatile and thus more vulnerable to the effects of industrial processes (Haqq-Misra and Baum 2009), leaving a shorter time window for mitigation. Nick Bostrom has explored this possibility of greater climate sensitivity further in his “vulnerable world hypothesis” (Bostrom 2019) and it begs to reason that mitigation efforts would be more focused in such a world. However, since climate response times are longer and sensitivity less pronounced, climate mitigation policies have become mired in culture and media politics (Newman et al. 2018) but also a statist logic (Karlsson 2018) by which it has become more important for states to focus on their own marginal emission reductions in the present rather than asking what technologies would be needed to stabilize the climate in a future where all people can live a modern life.